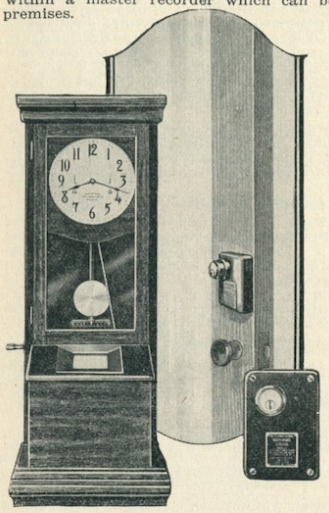
INTERNATIONAL

Made by INTERNATIONAL BUSINESS MACHINES CORPORATION, INTERNATIONAL TIME RECORDING DIVISION, *general offices, 50 Broad Street, New York City. Works, Endicott, New York, and Toronto, Ontario, Canada. Sold by their own centrally controlled sales force through branch offices in all principal cities of the world.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

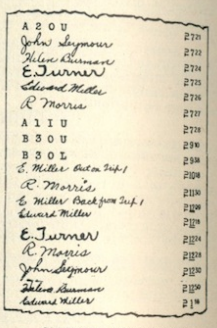
The records made by this system are printed on a tape contained within a master recorder which can be located in any part of the premises.



A 2 0 U 27 21

SPECIMEN LOCK RECORD

A—Identifies person.
2—Identifies door.
O U—Shows door was unlocked (U) from the outside (O).



SPECIMEN RECORD STRIP

combining employees' and watchman's registrations.

C 3 W 27 10

SPECIMEN WATCHMAN RECORD

C3—Identifies station from which registration was made.
W—Shows registration was made by Watchman (W). Hour underscored for P.M.

The record is made in one line and shows an initial representing the watchman, number designating the station from which he registered, and the time he registered, (the date, hour and minute). As many as 64 stations may be connected in the one system.

As stated in Section No. 46-1, the same master recorder in which are made the records of watchman's visits to various parts of the premises, can also be used for recording the time of locking or unlocking doors equipped with this company's recording lock units, and may also serve as an in-and-out recorder for employees who, to identify themselves, sign their names beside each time imprint. Thus the same recording tape may carry printed records of door lock operations, employees' in-and-out registrations and watchman's registrations.

Price, Series 3500, master clock, including batteries, etc.	$250.00
Door lock, per each, extra	50.00
Watchman's station, per each, extra	40.00

Typewriters

Sec. 47-1: Portable Typewriters
Sec. 47-2: Standard Typewriters
Sec. 47-3: Motorized Typewriters

For typewriters operated electrically from remote control, see Message Recording Systems, Section No. 27-4.

For typewriters equipped for addressing stencils for use with addressing machines, also typewriters equipped for the quick and convenient inserting of envelopes and labels, see Addressing Machines, Section No. 4.

For typewriters equipped for typing index lines on visible record forms, see Visible Record Equipment, Section No. 49.

For typewriters equipped for billing purposes, also typewriters for writing on continuous forms, see Billing Machines, Section No. 7.

For typewriters equipped for bookkeeping purposes, see Bookkeeping Machines, Section No. 8.

For typewriters equipped for writing in bound books, see Elliott-Fisher descriptions in Section No. 7.

For typewriters equipped for writing form letters automatically, see Type Duplicators and Printers, Section No 19-1.

Since typewriters are used so universally, and have become so indispensably a part of business, little need be said herein as to the advantages of their use and the scope of their performance and adaptability.

The differences in construction are brought out in individual descriptions, and, simply as a measure of assurance that the terms as used are properly understood, the following explanation concerning the principal standards of construction, is offered.

TYPES

The term Standard Typewriter, as used herein, refers to full size typewriters as commonly used in offices, as distinguished from Portable Typewriters, also suitable for office as well as for traveling and home use, which are of more compact construction and lighter in weight.

Motorized Typewriters is the term used to designate the recent application of electric motor power to the mechanical operation of typewriters. Typewriters so equipped have been referred to elsewhere as "Electric Typewriters", giving rise to the belief, in the mind of the casual observer, that the operation of the typewriter is accomplished by electrical means, (electro magnets, for instance), whereas actually, the functioning is entirely mechanical, driven by a shaft propelled by an electric motor. This newest development of typewriter construction is more fully discussed in Section No. 47-3.

TYPE BAR OPERATION

The accepted standard of construction, if prevailing practice is an indication, is the front, or front-and-down stroke type bar operation. On portable models the down stroke is more pronounced, due to the need of mounting the carriage as low as possible to conserve the overall height of the machine. Either construction derives its principal reason from the need for visibility of the writing line, but it has also been found the most acceptable for other most important constructional and operating considerations.

All successful noiseless typewriter construction has likewise used the principle of front stroke type bar operation.

CARRIAGE SHIFT AND BASKET SHIFT

Carriage Shift means that the depression of the shift keys to permit the writing of capitals, raises the carriage (hence, also the paper in the carriage) to the position to receive the impression from the upper character on the type bar.

Basket Shift (also called the Segment Shift) means that the entire section of the machine in which the type bars are mounted, (called the basket), is moved when the shift keys are depressed for the writing of capital letters. The carriage remains stationary: the basket being depressed when the shift key is operated, thereby bringing the upper character on the type bar into proper position of alignment on the writing line.

The user of typewriters equipped with the standard, correspondence paper width of carriage, (for letterheads, etc., up to 10" in width), need not concern himself with this distinction in construction. The efficiency and convenience of either style are about equal on narrow carriage machines.

Basket shift construction has certain advantages, however, in typewriters equipped with wide carriages. Since no difference exists in the size or construction of the type segment (basket) of typewriters equipped with wide carriages, as compared with those equipped with the narrower sizes, there is no more effort required on wide than on narrow carriage models to operate the shift key. The basket, not the carriage, is moved by the shift keys.

It is obvious that, since the weight of a carriage increases in proportion to its length, machines equipped with carriage shift require the lifting of a greater weight in shifting on wide carriage machines than they do on standard size carriage models. Most manufacturers overcome this by the application of counter weights and compounding the leverages of the shift keys.

KEYBOARDS

Typewriters with their keyboards arranged in four rows are said to have Standard keyboards. Those having their keyboards arranged in three rows are considered to have Universal keyboards.

Upper: 3-ROW KEYBOARD
Lower: 4-ROW KEYBOARD

Unquestionably, custom and usage have secured a place for the four-row keyboard that must endure.

Operators trained through years of schooling and experience, prefer it, and the leading, successful manufacturers of typewriters have

adopted it as standard equipment. In isolated instances some manufacturers continue to furnish typewriters with three- as well as four-row keyboards, but the three-row models are subsidiary to the four-, and are offered principally for home use.

The present day trend of construction is to locate shift keys at both right and left sides of the keyboard, and to incorporate in the keyboard the principal control keys, such as backspacer, single-key tabulator key, etc.

TABULATORS

A single-key tabulator is controlled from a single key on the keyboard, and is suitable for all general forms of correspondence typing. Decimal places are tabulated by backspacing, since a single-key tabulator stops the movement of the carriage always at the same decimal position at each place on the sheet for which a stop is set.

A decimal tabulator has a key for each decimal position at each stopping position as denoted by the stop set. It eliminates the necessity for backspacing, and permits tabulation to the exact decimal position at any time. Decimal tabulators are principally employed on typewriters intended for billing, invoicing, statistical or tabular work. They offer no special conveniences beyond those supplied by a single-key tabulator on typewriters for ordinary correspondence.

There are some variations of the above types of tabulators, such as one, a five-key tabulator, representing a multiple arrangement of a single-key tabulator, to stop the carriage at five different positions, such as to position paragraph indentations, complementary close, etc. Decimal positions, where required are tabulated by backspacing from the tabulated stopping position.

CARRIAGES

The size of a carriage, measured by the maximum width of the sheet of paper it will accommodate and the length of the writing line, is to be determined, naturally, by the character of the work for which the typewriter is intended. Standard size carriages, for machines for letter writing, take paper 10" to 11" wide, and write a line 8" to 9" long. Practically all manufacturers of standard size typewriters supply models with wider carriages. Each stock size is approximately 2" longer than the next smaller size. The widest are 30" and 36".

With few exceptions, wide carriage equipment is not possible of substitution on narrower carriage models. Separate complete machines are supplied for wide sheets.

Several manufacturers equip their machines with removable and interchangeable platens, so that for manifolding work a hard rubber or metal platen may be used, and later substituted by a softer and more quiet platen for best results in single carbon typing. Special interchangeable platens are also furnished for such machines for holding cards and labels firmly in place while being typed.

NOISE REDUCING FEATURES

There is only one make of noiseless typewriter on the American market. But most manufacturers, in recent years, have incorporated noise reducing features in the mechanisms of their machines, sound deadening materials and construction in the frames and housings, and have developed new ideas in platens, all of which make for more quiet, and more pleasing sound of operation.

No sacrifice in essential qualities has been permitted however. It is not expected that a mechanism such as a typewriter which is designed for speed, manifolding blows of the type bars, quality of impression and durability, can, unless constructed on true noiseless principles, be entirely without the sound of operation associated with well constructed machine operation.

TYPE FACES

Many business concerns give as much attention to the harmony

SPECIMEN TYPE FACES

PICA. The standard type.
Over ninety per cent of the ma-
chines used for ordinary pur-

MEDIUM ROMAN. Much used
by professional men and also
adapted for general uses.

ELITE. This is a small
elegant letter which has no equal
for polite correspondence.

PICA ITALIC. An attractive face
and size for admirers of Italic.
1,2,3,4,5,6,7,8,9,0.

LARGE ITALIC. Purpose similar
to the larger sizes in other

BOOK TYPE. There has also
developed a small demand for
type resembling printer's type

ELITE GOTHIC. THIS IS A SAMPLE OF WORK ON
THE L.C.SMITH & BROS. TYPEWRITER WITH THE

SPECIMEN TYPE FACES

MODERN GOTHIC. A VERY LEGIBLE
& BEAUTIFUL GOTHIC LETTER WITH
NEW FIGURES 1 2 3 4 5 6 7 8 9 0

DOUBLE MODERN GOTHIC. A VERY
LEGIBLE AND BEAUTIFUL DOUBLE CASE
LETTER OF MODERN DESIGN.

PIN POINT CHECKS WRITTEN
WITH THIS TYPE ARE DIFFICULT

PIN POINT THERE HAS BEEN SOME
DEMAND FOR A SMALLER PIN POINT

Bulletin

This is a sample of the

VERY USEFUL FOR PUBLIC
NOTICES AND ALL DISPLA
1234567890

REMINGTON-NOISELESS TYPES

PICA. The standard type.
Over ninety per cent of the ma-

ELITE This is a small,
elegant letter which has no equal

and individuality of their typewritten communications as they do to the design and appearance of their letterheads. The selection of the style of type face is, with such users, an important consideration.

The styles shown by the specimens on two pages of this Section are typical of the most popular. They are not, however, to be considered as complete. There are many other styles, some of which are distinctive with each make.

The most popular type face is pica, spaced ten characters to the inch. Elite, spaced twelve characters to the inch, (and sometimes, for extended appearance, ten characters to the inch), is nearly as widely used. Bulletin type, shown in two specimens herein, is now furnished by most manufacturers for notices and the addressing of labels and tags.

Type faces for nearly all languages, including those written from right to left (Hebrew, Arabic, etc.), and those written in vertical lines (such as Japanese), are furnished by most manufacturers, as are special faces including signs and characters used in mathematics, chemistry and other sciences. Dead keys, for writing diacritical marks required in many languages, and certain scientific characters, can be furnished on practically any machine. Dead keys write but do not space.

The Hammond Typewriter may be equipped with a wider variety of type faces than any other machine. One face may be substituted for another at any time. (See descriptions for details of construction and styles of type faces in English and other languages).

Other makes of typewriters are permanently equipped with one style of type face, or for writing in one language, although machines are obtainable for writing in three different languages without change, such as English, French and German, or English, Spanish and French. In such cases the letter characters are English, the equipment of dead keys permitting the typing of special marks properly to write the additional languages.

Practically all manufacturers furnish machines equipped with pin-point type and special ribbons for the writing and protecting of checks and important documents. The ink is driven into the perforations made in the paper by the striking of the pin-point characters on the type bars. Usually the style of type on such machines is Pica Gothic.

Analysis of Typewriters

In describing the features of the different makes of typewriters, an effort has been made to adhere to a standard form of analysis. It will be found that most of the machines conform in the sequence of the descriptions of their different features, to the following table. Thus in comparing one machine with others, the same features will be found in the same order, in each description.

Principally emphasized features
- The general characteristics of each machine.

General features
- Model number.
- Date first put on market.
- Classification, (standard, portable or motorized).
- Type bar stroke, (front, down or thrust).
- Kind of shift, (basket or carriage).
- Visible or blind writing.

Keyboard
- Number of rows.
- Number of keys.
- Number of characters.
- Location of shift keys, (right or left).
- Shift lock, (position).
- Shift lock release, (position).
- Feature keys on keyboard, (Back spacer key, Tabulator key, Marginal release key).
- Adjustable touch.

Carriage
- Kind of bearings.
- Hand or motor return, (a feature for distinction on motorized typewriters only).
- Interchangeable platen.
- Taking paper, (size).
- Writing line, (length).
- Design of escapement, (rack or wheel).
- Feed rollers, (single or unit).
- Tabulator design, built-in or attached, (number of keys).
- Line space lever, (right or left).
- Adjustable line spacing, (number of positions).
- Back spacer.
- Margin locks, (right or left).
- Line indicator, (type of).
- Paper fingers.
- Variable line spacer.
- Lateral paper guide.

Printing Mechanism
- Construction of type bars, (corrugated).
- Mounting, (segment or individual hangers).
- Stroke stop.
- Adjustments or bearings.
- Adjustable impression.
- Type guide, (lateral, vertical).
- Heel to prevent battering.
- Ribbon, (colors).
- Size.
- Stencil cut-out.
- Automatic reverse.

Construction
- Base, (open or enclosed).
- Noise-reducing features.
- Finish.
- Type faces.
- Portables:
  - Weight with case.
  - Weight without case.
  - Outside dimensions of case.

Price
- Carriage lengths.

What Constitutes Speed in Typewriting?

While many other qualifications are customarily taken into consideration in the employment of stenographers and typists, the following records may be desirable for a clear understanding as to what constitutes speed in typing. They are taken from the World's Typewriting Championship Contests, held in New York City, October 18, 1926.

The subject matter for all three divisions was a printed book, hence different from the usual media from which transcribing is done in every day business. The print was plain and easy to read, and of course there were no errors or changes from copy to be considered, such as very often occurs under actual office conditions, and all paragraphing, spelling and punctuation were no task for the typist except to follow them as printed.

Also it must be understood that the words were averaged at five characters to the word. The gross number of strokes was reckoned from the printed copy and divided by five to secure the number of gross words from which all deductions for errors were made. Ten words, however, were deducted for each error.

The plan of counting five characters to a word provides a standard basis of competition on any kind of transcribing, including languages other than English.

The World's Championship contested annually, is open to all typists. It comprises one hour's continuous writing. Following are the high and low scores:

STROKES	GROSS WORDS	ERRORS	PENALTY	NET WORDS	PER MINUTE
42,073	8,415	51	510	7,905	132
37,623	7,525	26	260	7,265	121

The World's Amateur Championship is open to all typists who have not previously won this event. It comprises thirty minutes continuous writing. Following are the high and low scores.

STROKES	GROSS WORDS	ERRORS	PENALTY	NET WORDS	PER MINUTE
18,226	3,645	17	170	3,475	116
16,423	3,285	9	90	3,195	107

The World's School Novice Championship is open to all students who have not used a typewriter in any way until sixteen months previous to the contest. It comprises fifteen minutes continuous writing. Following are the high and low scores.

STROKES	GROSS WORDS	ERRORS	PENALTY	NET WORDS	PER MINUTE
6,659	1,332	19	190	1,142	76
5,925	1,185	15	150	1,035	69

Portable Typewriters

While portable typewriters are generally considered as primarily intended for use in the home, in schools, and in traveling, it is perhaps not presuming too greatly to state that the checks for the payment of portable typewriters are made out by the man in the office. Hence, this section on Portable Typewriters is not only desirable, but important to the business executive, permitting him to analyze and compare the features of construction and equipment on each make now available.

The number of business concerns that are equipping their traveling representatives with portable typewriters is constantly increasing. The importance of close contact with traveling representatives makes it only natural that the extent of detail of the information which representatives send in to their supervisors or the home office be encouraged. Therefore, the means of writing reports and other correspondence, including that required to be sent to customers, from places on the road, should be the most convenient possible.

A carbon copy retained by the traveling representative serves not only to avoid disputes and confusion, but saves the time of both the representative and those in the home office, by permitting reference to be made to the date of the communication, instead of requiring the rewriting of portions of it so as to assure mutual understanding.

Such reports are usually made up in a hotel room after business hours—almost always after the public stenographer has left for the day. Hence, much greater time and considerably more effort are expended than if a portable typewriter were available.

It seems to be a logical conclusion that the convenience and time saved, and the detail and definiteness of understanding which the use of a portable typewriter by a traveling representative makes possible in his reports and correspondence, well warrants the investment which, in most cases, can be offset by the accruing advantages during a six months to one year period.

COMPARISON OF PORTABLE TYPEWRITERS

	FOLDING	CHARACTERS	KEYBOARD	CARRIAGE *Paper*	CARRIAGE *Line*	*Weight*	DIMENSIONS *Width*	DIMENSIONS *Depth*	DIMENSIONS *Height*
Corona Three	Yes	84	3	9¾"	8.3"	9¾ lbs.	12½"	10"	4⅝"
Corona Four	No	84	4	9⅞"	8.3"	12 lbs.	13¼"	12½"	4⅞"
Corona XC	Yes	90	3	9¾"	8.3"	10 lbs.	12½"	10"	4⅝"
Hammond Folding	Yes	180	3	9½"	8.5"	11½ lbs.	12"	9"	8"
Hammond Mathematical	Yes	240	3	9½"	8.5"	11½ lbs.	16"	14"	8"
Remington	No	84	4	9½"	8.5"	11¾ lbs.	12¼"	11⅞"	4½"
Royal	No	84	4	9¾"	9.25"	12½ lbs.	12⅞"	12⅛"	5½"
Underwood Three	No	84	3	9⅝"	7.6"	9¾ lbs.	11¾"	8¾"	4"
Underwood Four	No	84	4	9⅝"	7.6"	12⅞ lbs.	11¾"	10⅝"	4¾"

ALLEN

Made by the ALLEN TYPEWRITER COMPANY, *Allentown, Pennsylvania. Sold through specially appointed dealers and agents.*

SPECIFICATIONS

General features: Portable size, front stroke, double shift, visible writing. Placed on market in 1921.

Keyboard: Three rows, 29 keys, writing 87 characters; shift key for left hand operation equipped with positive lock and release; tabulator key on lower right corner of keyboard; back spacer lever located on front cross member of frame, operated by either thumb; left marginal stop and release, same release used for line lock release.

Carriage: Mounted on ball bearings; takes paper 9½ inches wide, writing line 7½ inches long; rotary escapement. Single paper feed roller; single key tabulator; right-hand line space lever with adjustment for single, double and triple line spacing.

Printing mechanism: Type bars of special alloy steel mounted in a slotted segment; type guide at printing point. Two-color ½-inch ribbon with semi-automatic reverse.

Construction: Frame of cold rolled steel; weight 11¼ pounds; base size 10x12 inches, height 7 inches. Type face, pica only.

Models and Prices

Regular model, black enamel finish.....$50.00
Metal carrying case, extra..... 2.50

BARR

Made by the BARR-MORSE CORPORATION, *Ithaca, New York. Not as yet in the production stage.*

This new portable typewriter was exhibited in the fall of 1926 but is not as yet in production.

SPECIFICATIONS

General features: Portable size; front and down stroke; single (basket) shift; visible printing.

Keyboard: 4-rows with right and left hand shift keys, with left hand shift lock and release; back space key located on the keyboard.

Carriage: Mounted on ball bearings with ball spacing controller; takes paper 9½ inches wide; writes a line 8 inches long; escapement is of the bevel dog type,—the universal bar is operated directly by the type bar. Left hand line space and carriage return lever with adjustment for single and double line spacing. Right and left hand adjustable margin stops; line lock and margin release controlled from a key on the keyboard. The platen is 1½ inches in diameter, (the same size as is generally used on standard sized typewriters). A variable line spacer of clutch design is built into the platen core and is operated from the right hand platen knob.

Printing mechanism: Type bars are flat steel corrugated, with heels to prevent battering; mounted in a solid segment; segment shift; type guide at printing point. Two-color ½ inch ribbon, 12 yards long, with automatic reverse operating on a single stroke of a key. The ribbon is fed by positive mechanism with each printing stroke, but the ribbon is not moved when the space bar is operated or when the carriage is tabulated by hand.

Construction: Unit construction in complete sub-assemblies. Weight, with case, 16 pounds; without case, 13 pounds. Finish, black enamel with nickle trim. All standard type faces.

Price has been established tentatively at.....$65.00

CORONA

Made by L. C. SMITH AND CORONA TYPEWRITERS, INC. *Executive offices, Syracuse, New York. Sold through branch offices and by specially appointed dealers and their own sales force.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

There are three models of Corona portable typewriters: **Corona Four,** a standard equipped 4-bank machine; Corona Three, a 3-bank keyboard machine; and Corona X-C, a 90-character special keyboard machine of the 3-bank type.

MODEL FOUR

This is the latest model, first placed on the market in May, 1924. The chief differences between it and earlier models are that it has a standard 4-bank, single shift keyboard, and it does not fold. It is low in design, being 4½ inches high overall.

It has 42 full size keys with standard distance between each, making this model suitable interchangeably with standard office typewriters. It has a 10-inch carriage, permitting insertion of No. 10 envelopes, and writes a line 8.3 inches long (83 pica spaces); ball bearing, carriage shift with right and left hand shift keys, left hand line space and carriage return lever, standard 12-yard, 2-color ribbon with automatic and manual reverse; variable line spacer and carriage release lever at both ends of carriage. The margin release and back-spacer keys are located in the keyboard.

This model has an accelerating type bar action, which means that the type bars are so constructed that they reach their highest speed at the printing point, thus obtaining maximum power of impact of type face against the writing surface, providing clean-cut type impressions, efficient stencil-cutting ability and manifolding power.

It has double universal bars: one bar, operated by the key levers actuates the ribbon movement, and the other, operated by the type bars, actuates the escapement. This construction permits of independent adjustment of the ribbon and escape mechanisms and affords a light even touch.

Specifications of Model Four

General Features: Portable size, front stroke, carriage shift, straight line visibility. This model does not fold.

Keyboard: Four rows; provision made for dead keys if required; right and left hand shift keys with left hand shift lock and release; back-space key located in keyboard, equipped with positive stop to prevent carriage moving more than one space at a time.

Carriage: Mounted on ball and roller bearings; takes paper 9⅞ inches wide; writing line 8.3 inches long. Left hand line space and carriage return lever with adjustment for single and double line spacing. Right and left hand adjustable margin stops mounted on a slide, marked with scale to correspond with markings on the paper scale; line lock release located in keyboard.

Printing Mechanism: Type bars are flat steel with heels to prevent battering; mounted in solid slotted segment; carriage shift; mechanical type guide at printing point. 2-color, ½-inch ribbon, 12 yards long, with automatic and manual reverse, and cut out for stencil work.

Construction: Stamped aluminum frame, one piece, reinforced with three rigid cross members, one of which is integral with the frame. Size of machine, 11 x 12½ x 4¼ inches; outside dimensions of case, 13¼ x 12½ x 4⅞ inches. Weight: 12 pounds with case; 9¼ pounds without case. Finish: Black enamel, with nickel trim. Type faces: Pica, elite, medium Roman, billing or italic.

MODEL THREE

Model Three has a 3-row keyboard; 10-inch carriage, taking all widths of paper up to and including 9⅞ inches. The actual writing line is 8.3 inches. The ribbon on this model is 7 yards long, 2 colors.

MODEL X-C

This is a special model of the 3-row keyboard machine for chemists, doctors, engineers, optometrists, technicians, and those writing in foreign languages. One style of this model writes in eight different languages through the medium of dead and accent keys; other types of this model may be obtained to write in any one of 50 languages. In construction and design, this model is the same as Corona Model Three, except for the keyboard. While the model Three has 28 keys, providing 84 characters, Model X-C has 30 keys, providing 90 characters, which makes possible the inclusion of all signs and characters used by professional or technical men and linguists. Any one of four keys may be made dead; also the carriage can be built to move from left to right (the opposite direction from the usual) to write Hebrew, Arabic, and such languages. Special keyboards can be designed to meet the individual needs of persons or business organizations.

Specifications of Models No. 3 and X-C

General Features: Portable size, front stroke, double shift (carriage shift), visible writing. When the machine is to be placed in the case, the carriage folds over on the keyboard, during which time it is disconnected from the escapement. When folded back the carriage automatically locks itself in operating position.

Keyboard: Three rows. The regular model has 28 keys writing 84 characters; the XC model has 30 keys writing 90 characters; the XCD model has 30 keys writing 90 characters of which four keys are "dead" (i. e., these four keys are not connected with the spacing mechanism and are used for language accents). Right and left hand shift keys with left hand shift lock and release. Back space key situated above and to right of keyboard.

Carriage: Hinged on two steel arms to allow folding compactly over keyboard when placed in the case. Mounted on ball bearings and rollers. Takes paper 9¾ inches wide with writing line 8.3 inches long. Escapement is dog and rack design with adjustable tension. When folded the escapement is locked out of engagement with the rack to prevent damage while machine is in transit. Left hand line space lever with adjustment for single, or double line spacing. Back space mechanism operated from key on keyboard; right and left hand margin stops.

Printing Mechanism: Type bars are flat steel with heels to prevent battering; mounted in solid slotted segment. Type guide at printing point. Two-color ½-inch ribbon with automatic reverse.

Construction: Stamped aluminum frame, one piece. Size of machine when opened, 9¾x11⅝x6¾ inches; when folded, 9x11⅝x3⅞ inches; outside dimensions of case, 12½x10x4⅝ inches. Weight, 9¾ pounds with case; 6¾ pounds without case. Finish, black enamel with nickel trim. Type faces: Pica, elite, medium Roman, billing or italic.

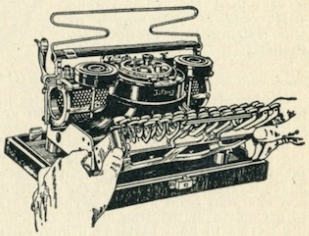
Prices

Model Four, 4-bank keyboard.....$60.00
Model Three, 3-bank keyboard, writing 84 characters..... 50.00
Model X-C, same as Model Three, but writing 90 characters, and from one to four dead keys as required.....$55.00

HAMMOND

Made by the HAMMOND TYPEWRITER COMPANY. *Factory and general offices: 132nd Street at Brook Avenue, New York City. Sold through branches and specially appointed dealers.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



Portable models of Hammond typewriters are designed to fold compactly for carrying. In construction they are the same in all respects to the regular Multiplex model, described under Standard Typewriters, Section No. 47-2, except that all but the working parts are made of aluminum. Carriage 9½ inches wide, writing a line 7 inches long. It weighs less than 12 pounds and is furnished in a leather traveling case, the cover of which is removable, leaving the bottom to serve as a base for the machine.

The space bar folds over the keyboard and the keyboard folds into a vertical position. The paper rest (corresponding to the paper table) folds over the top of the machine. The carriage is locked in position when the machine is folded.

All portable models are regularly equipped with variable spacing feature described under Standard Typewriters.

Models and Prices

[PORTABLE MODELS]

Model No. 26:
With 2 variable spacing adjustments, 10 and 14 characters to the inch $97.50
With 3 variable spacing adjustments, 10, 14 and 18 characters to the inch $110.00
No. 26 Mathematical Model, with keys for extra signs and characters up to 120, equipped with shift keys for numerator and denominator:
With 2 variable spacing adjustments, 10 and 14 characters to the inch $112.50

With 3 variable spacing adjustments, 10, 14 and 18 characters to the inch $125.00

All models are equipped with two type shuttles (two sets of type faces), and are fitted in carrying case. Extra type faces, $4.00 each and up.

For illustrations of specimen type faces, and language shuttles regularly supplied, see Hammond descriptions in Section No. 47-2.

REMINGTON

Made by the Remington Typewriter Company. *Executive offices, 374 Broadway, New York City. Sold by their own sales force through branch offices in principal cities and by office equipment dealers.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

Portable size, front and down stroke, single shift (carriage shift), visible writing. Type bars, when machine is to be placed in case, rest flush with top plate, and are raised, all at one time, to a writing position when machine is to be operated. A lever on the right side frame controls the raising and lowering movement.

The latest model was placed on the market in April, 1925. It has been improved structurally; engineering improvements have been made in the type bar and ribbon mechanisms, improving the quality of the work. The carriage has been redesigned to take a standard No. 10 envelope (9½" wide); the length of the writing line is now 8½ inches.

SPECIFICATIONS

Keyboard: Four rows, standard, 42 keys writing 84 characters; right and left hand shift keys with shift lock and releases; back space and margin release keys.

Carriage: Mounted on roller bearings; takes paper 9½ inches wide, writing line 8½ inches long; takes a standard No. 10 envelope. Rack escapement. Two sets of paper feed rolls with release lever. Left hand line space lever with adjustment for single, double spacing. Back space mechanism operated from key on keyboard; right and left margin stops with lock to prevent over printing at end of line; variable line spacer; carriage locking device to hold carriage firmly when in case.

Printing Mechanism: Type bars are of flat steel corrugated, with case hardened type and heels to prevent battering; mounted in a solid slotted segment. Type guide at printing point. Two-color ½-inch ribbon, with automatic reverse.

Construction: Sheet steel frame. Semi-folding. All metal parts not nickeled are rust-proofed. Weight, 11 pounds 12 ounces with case; outside dimensions of case, 12¼ inches long, 11⅞ inches wide and 4½ inches deep. Type faces: pica or elite.

Models and Prices

Regular Model, black enamel finish, with case $60.00
De Luxe Model, ivory enamel finish, leather case 75.00

ROYAL

Made by the Royal Typewriter Company, *General offices, 314 Broadway, New York City. Sold by their own sales force and through dealers.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

The Royal portable typewriter, which resembles very closely in its appearance and constructional features the standard typewriters made by this company, was first offered on the market in August, 1926.

SPECIFICATIONS

General features: Portable size; front and down stroke; carriage shift; non-folding.

Keyboard: 4-rows, comprising 42 keys, writing 84 characters; right and left hand shift keys, with shift lock on left side of keyboard. Shift lock release is embodied in the shift key, a slight pressure on either side releasing the shift. Marginal release and back space keys located in the keyboard.

Carriage: Double ball bearing (4 balls); takes paper 9¾ inches wide; writing line 9¼ inches long; rotary (wheel) escapement; 2 sets of feed rolls, comprising one long feed roll in the rear of the platen and 2 shorter feed rolls at the front; left hand line space lever with upturned finger piece, with adjustments for one and two line spaces. Back spacer key located in the keyboard; margin lock release located in the left side of the keyboard; line indicator comprises a short line at the printing point and a scale the length of the platen, two line spaces below the printing line. Tilt back card ball with adjustable feed rolls; lateral paper guide comprises a graduated and numbered scale, on the upper edge of the paper table. This scale is also used for positioning the marginal space.

Printing mechanism: Type bars are flat steel, corrugated and tempered, with heel to prevent battering, mounted in a slotted segment; a type bar striker plate on the segment is intended to insure uniform impressions; type guide of vertical design, non-adjustable. Two-color ½ inch ribbon, 12 yards long; standard interchangeable spools; stencil cut-out and two-color change; automatic and hand ribbon reverse.

Construction: Base entirely enclosed with dust-proof features; the machine is quiet in operation, consistent with efficient performance; high gloss black enamel finish. Weight, with case, 12½ pounds; weight, without case, 9½ pounds. Overall width of case, 12⅞ inches; overall depth of case, 12⅛ inches; overall height of case, 5½ inches.

Machine remains attached to its baseboard when in use. All standard type faces are furnished.

Price $60.00

VICTOR

The Victor Adding Machine Company, 3900 North Rockwell Street, Chicago, Illinois, are nearing the production stage, and are expected to put on the market at an early date, a 4-bank portable typewriter, to be sold through dealers.

Full details will be announced through the Digest Supplement Service as soon as possible.

UNDERWOOD

Made by the UNDERWOOD TYPEWRITER COMPANY, INCORPORATED. *General offices, 30 Vesey Street, New York City. Sold by their own sales force through branch offices located in principal cities and through specially appointed dealers.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

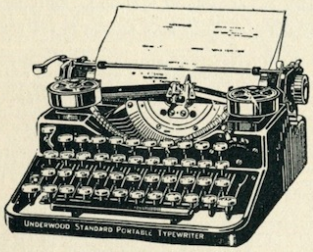
In April 1926, a four-bank single shift portable model was put on the market. Both the three-bank and the four-bank models are now being sold.

In general appearance the four-bank model is similar to the three-bank machine. The following represent the principal differences in construction:

The four-bank model has 42 keys, writing 84 characters.

It has a front paper-bale with adjustable rollers for holding small labels, bulky papers and cards, firmly in place while typing, and to permit writing at the extreme top and bottom of paper or cards.

WITH 3-BANK KEYBOARD



WITH 4-BANK KEYBOARD

The marginal stops are on a rack in back of the paper rest, and are set on a scale corresponding to the main front scale.

SPECIFICATIONS

General Features: Portable size, front stroke, carriage shift, visible writing.

Keyboard: Three-row model has 28 keys writing 84 characters; four-row model has 42 keys, writing 84 characters; left hand and right hand shift keys, with left hand shift lock; back space key. Individual key tension.

Carriage: Mounted on rollers and ball bearings. Takes paper or envelopes 9⅝ inches wide, writing line 7.6 inches long. Ball bearing rotary escapement. Left hand line space lever with adjustment for single or double spacing, and platen ratchet release; sliding marginal stops in rear of carriage; automatic line locking mechanism; adjustable paper fingers on 3-row model; adjustable paper-bale on 4-row model; writing line scale; margin release key and carriage release lever at right end of carriage.

Printing Mechanism: Type bars are of flat steel, corrugated, mounted in a slotted segment; projection on type end to prevent battering or breaking. Type guide at printing point. Two-color Standard (regular model) Underwood ½ inch ribbon with manual reverse, and stencil device.

Construction: Cast aluminum frame, non-folding. Dimensions three-bank model: Outside dimensions of case, length 11¾ inches; depth 8¾ inches; height 4 inches. Weight without case, 6 pounds, 11 ounces; with case, 9 pounds, 13 ounces. Four-bank model: Outside dimensions of case, length 11¾ inches; depth 10⅝ inches; height 4¾ inches. Weight without case, 10 pounds; with case, 12 pounds 14 ounces. Both models are attached to base of case, which forms a knee-table when typing.

Three-bank model, with carrying case $50.00
Four-bank model, with carrying case 60.00

DEMOUNTABLE

Made by the DEMOUNTABLE TYPEWRITER COMPANY, *Fond du Lac, Wisconsin. Sold by dealers and special representatives.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

PRINCIPALLY EMPHASIZED FEATURES

1. Made in sections, all interchangeable and replaceable. A latch at the rear of the machine allows the operator to remove the carriage and outside frame as one assembly, from the printing mechanism, for cleaning or replacement.

2. Carriage and platen instantly removable and interchangeable. Paper feed rolls removable for cleaning. The same machine may at any time be changed into a wider carriage machine by the purchase and substitution of a wider carriage, which is interchangeable as needed, with the original narrow carriage.

The action or type bar assembly unit, the part of the typewriter most susceptible to wear, can be removed and replaced with a new unit at any time, at about one-half the usual cost of a new typewriter. Type arrangements, of different sizes or for foreign languages may likewise be substituted. Standardized manufacturing process assures interchangeability of like parts of different machine.

3. All the refinements of usual standard typwriter construction, plus the demountable feature, are embodied in the machines.

ILLUSTRATING DEMOUNTABLE FEATURE

Note: Model No. 2, placed on the market in January 1925, differs from previous models in that the outside frame and top deck, including the entire carriage assembly, are now removable in one unit, and the ribbon assembly is contained in the printing unit, in which are contained the keys and type bar assemblies, etc.

The ribbon spools are completely concealed, permitting a clear upper deck and affording a stream line appearance. The carriage and outside frame can be removed without disturbing the ribbon. A latch, located at the rear of the machine, when pulled out permits the top section to be lifted off.

The ribbon reverse is automatic on Model No. 2, the feeding mechanism being actuated by the operation of the type bars and universal bar; the manual reverse as on previous models is retained.

The type basket has been redesigned to allow for greater clearance between the type bars when in action. All important friction points have ball bearings. All gears have been eliminated from the inside of the machine; key levers have been redesigned to permit quicker and easier action. Key lever tension is adjustable to suit the individual touch of the operator, the tension of all keys being adjusted at one time; individual key tension is not provided for. The line finder has been improved with a view to facilitate writing of cards and multiple sheets.

SPECIFICATIONS

General Features: Standard size, front stroke, single (basket) shift, visible writing; unit construction, demountable by the operator.

Keyboard: Four rows, 42 keys writing 84 characters; right and left hand shift keys equipped with shift lock and release; back space key; margin release key situated above keyboard on front frame panel; tabulator key.

Carriage: Demountable by operator. Mounted on caterpillar ball bearings (two sets of eleven bearings mounted in a special frame so as at all times to present four balls in each set to the carriage rail). Platen easily removed and interchangeable. Removable unit feed rolls. By changing the carriage rail, a wide carriage may be substituted for a narrow carriage on any machine. Regular correspondence machine takes paper 11 inches wide, writing a line 9 inches long. Rotary escapement. Single key tabulator, operated from key on keyboard with stops set from front of machine, being accessible by tilting the paper table forward; right and left hand line space lever with adjustment for single, double or triple spacing and with ratchet throw-off; back spacer operated from key on keyboard; right and left hand margin locks; adjustable paper fingers; variable line spacer. Forward tilting paper table to allow adjustment of margin and tabulator stops.

Printing Mechanism: Removable and interchangeable, flat steel type bars, mounted in a one-piece slotted segment. Type guide at printing point. Type bars have heels to prevent battering of type.

Two-color, ½ inch ribbon with automatic, also manual reverse and throw-off for stencil cutting.

Construction: Demountable as above described; bearings protected by dust covers; ball bearings at important friction points. Type faces: pica, elite, medium Roman or pin point. Also made for writing all foreign languages.

Models and Prices

With 11-inch Carriage	$107.50
With 14-inch Carriage	117.50
With 18-inch Carriage	132.50
With 26-inch Carriage	160.00
Price of base section	30.00
Price of action unit (key lever section) for all width carriages	52.50

Prices of extra carriages:

11-inch, with way rod	$25.00;	without way rod	$23.50
14-inch, " " "	35.00;	" " "	32.00
18-inch, " " "	45.00;	" " "	39.00
26-inch, " " "	72.50;	" " "	65.00

ELLIOTT-FISHER

Complete descriptions of Elliott-Fisher typewriters are given in Section No. 7. Models equipped for bookkeeping purposes will be found described in Section No. 8.

All Elliott-Fisher typewriters have flat platens, making them practical for many operations of typing such as billing, invoicing, addressing tags and labels, typing on flat forms, and for all kinds of tabular and fill-in work. A special model is made for writing in bound books. They are not intended for regular correspondence use.

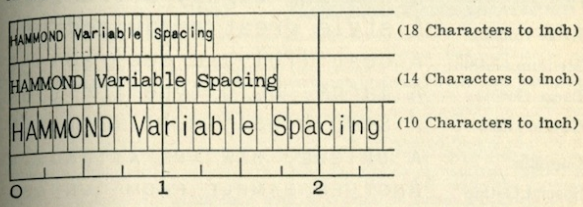
HAMMOND

See Also Portable Typewriters, Section No. 47-1
Motorized Typewriters, Section No. 47-3

Made by the Hammond Typewriter Company. *Factory and general offices: 132nd Street at Brook Avenue, New York City. Sold through branches and specially appointed dealers throughout the world.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

The principal feature of machines of this make is their ability to write characters variably spaced, and in different sizes and styles of type. The same machine may be adjusted quickly to write 10, 14 or 18 characters to the inch, the letter spacing corresponding with the size of type face.



The type faces on machines of this make are arranged on shuttles, which may be removed, and are interchangeable. Thus in combination with the variable spacing feature, one or several lines may be written 10 characters (pica or medium Roman size), to the inch, the next or several lines may be written in a slightly smaller face, (similar to elite), 14 characters to the inch, and the next or several lines may be written in a still smaller type face, (similar to mica size), 18 characters to the inch.

Variable spacing is a late development, and now standard equipment on all models. Adjustment is controlled by a small accessible lever located adjacent to the carriage.

These features will commend this machine to advertising men for preparing copy for the client or compositor, and will also add convenience, and make possible the compilation of reports which require considerable matter to be condensed in a smaller space, or with headings in a prominent style of type, and the page matter in a smaller size. Similarly different styles of type may be incorporated in the same copy through the use of different type shuttles.

The ability of the Hammond to write in a wide variety of languages, using interchangeable type shuttles on the same machine, is an outstanding characteristic. Shuttles are carried in stock, and may be ordered at any time for writing in the following languages:

ANAMITE
ARABIC
ARMENIAN
ASSYRIAN
BENGALI-ASSAMESE
BOHEMIAN
BRAILLE
(*for the Blind*)
BULGARIAN
CHILIAN
CHINESE PHONETIC
COPTIC
CREE-INDIAN
CROATIAN
CZECHO-SLOVAK
DANISH
DEVA NAGARI
DUTCH
ENGLISH
ESPERANTO
FRENCH
FRENCH-BELGIAN
FRENCH-CANADIAN
FINNISH
GERMAN
GREEK
HEBREW
(*Vocalized*)
HELVETIAN
HINDUSTANI
HUNGARIAN
INTERNATIONAL
Phonetic
IRISH GAELIC
ITALIAN
JAPANESE
KATA KANA
LITHUANIAN
NAGERY-HINDI
NAVAHO-INDIAN
NORWEGIAN
ORIYA
PERSIAN
POLISH
PORTUGUESE
PUNJABI
ROUMANIAN
RUSSIAN
SANSKRIT
SERVIAN
SIKH
SINDHI
SPANISH
SWEDISH
TIBETAN
TURKISH
UKRAINIAN
YIDDISH

HAMMOND TYPEFACES FOR ENGLISH AND OTHER LANGUAGES

Petite Gothic	Especially for condensing in Loose-leaf Manuals,
Miniature Roman	An exquisite type for priva
Small Roman	A neat and attractive style
Medium Roman	The standard size for busin
Multigraph	Specially made to match the
Clarendon	A new and highly attractive
Large Roman	A style greatly admired by
Medium Gothic	A beautiful and desirable t
Large Gothic	A large, bold type for the
Gothic Italic	*A special style of italic u*
Capitals	A UNIQUE, NEW AND ATTRACTIV
Special Gothic	ANOTHER SAMPLE FROM OUR ASS
Script	*Indispensable to those having*
Small Italic	*A very neat and useful styl*
Medium Italic	*For general use - Noted for*
Law Italic	A neat style for use in law
Attic	The banner display type - f
Irish-Gaelic	Óir ır man ro oo ȝnáov, ȝ o
Russian	Благодаря впередъ за все,
Russian Italic	*Просимъ Васъ быть вполнѣ ус*
German Text	Dieſes iſt eine Schriftprobe
Greek	Πολλαὶ γλῶτται θνητοῖς, ἀθα
Armenian	Շնորհ մեքենայ մը զանձ 2ան
Hebrew	והערץ היתה תהו ובהו וחשך על
Hebrew-Large	ם: ויאמר אלהים יהי אור ויהי
Turkish	ما كينه سيله يا ز يلمشدر. ا فندم
Arabic-Persian	است و ديگرها، گوئي جن است
Punjabi	ਕਿਉਂਕਿ ਪਰਮੇਸ਼ਰ ਨੇ ਜਗਤ ਨੂੰ ਅਜਿਹਾ ਪਿ

SPECIFICATIONS

General Features: A standard size machine, utilizing the type wheel principle; double shift; visible writing. Type faces are semi-circular one-piece plates (called shuttles) of vulcanized rubber composition on which are moulded a full set of characters (upper and lower case of a full alphabet, including figures, punctuation and special characters).

There is a total of 17 different sizes and styles, and special character arrangements for all languages, providing over 360 type arrangements, all interchangeable.

Operation: A broad-rimmed typewheel (also known as the type-carrier or anvil) is provided with two positions for clamping two different sets of type at one time around its rim, thereby affording at all times two styles of type on the one machine, each of which is interchangeable and may be replaced by any other style. Either set of type faces is brought into printing position instantly, by a setting knob.

As each character on the type-wheel face is designated by the depression of a key on the keyboard, the type-wheel brings the corresponding type character into position to be imprinted on the paper. A hammer, operating from behind the paper, makes the necessary impact to make the impression. The power of the hammer blow is always the same, producing absolutely uniform impressions regardless of the variation of the touch or key depression. The force of the hammer blow is adjustable and equipped with three different faces of different degrees of hardness, for varying numbers of carbon copies or for stencil cutting. Speed of operation is equivalent to typewriters of standard type bar design.

Keyboard: Standard, three row, double shift, writing 90 characters (or up to 120 characters on Mathematical models). (The older style of keyboard, known as the Ideal, has the keys arranged in semi-circular formation in two rows and has also a double shift.) Shift keys located on right and left sides of keyboard.

Carriage: Runs on ball bearings and its construction is such that it takes any width of paper. Three widths of carriages, varying in the length of the writing line, are provided but are not interchangeable. Paper is fed into the carriage, right side up; that is, the bottom of the paper is inserted first, and rolls itself up in the perforated drum of the carriage. A distinctive type of escapement mechanism is provided. Left hand line spacer with adjustment for single, double or triple spacing. Adjustable front right and left hand margin stops. A paper ball serves instead of the usual paper fingers.

Printing Mechanism: Type wheel construction as above described. Two-color ribbon with automatic reverse, and throw-off for stencil cutting.

Construction: Semi-enclosed. Dimensions: Width, 13 inches; depth, 13 inches; height, 7 inches; weight, 21 pounds, including cover and base.

Model No. 26, in which the above specifications are incorporated, was placed on the market October 1st, 1925, and supersedes all previous models in both standard and portable sizes, except the Reversible Model.

Prices

[Standard Variable Spacing Models]

Model No. 26, 8½-inch line:

With 2 variable spacing adjustments, 10 and 14 characters to the inch $105.00

With 3 variable spacing adjustments, 10, 14 and 18 characters to the inch 120.00

14-inch wide carriage, for any of above models, 12-inch line, extra. 20.00

No. 26 Mathematical Model, with keys for extra signs and characters up to 120, equipped with shift keys for numerator and denominator:

With 2 variable spacing adjustments, 10 and 14 characters to the inch $120.00

With 3 variable spacing adjustments, 10, 14 and 18 characters to the inch $135.00

Reversible Model, writes in either direction, from left to right, or right to left; controlled by lever, for such languages as Arabic, Persian and Hebrew, with spacing 10 characters to the inch..... 145.00

All models are equipped with two type shuttles (two sets of type faces).

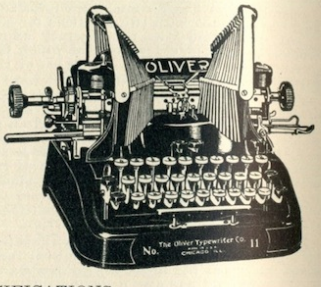
Additional type faces, $4.00 each and up.

Special spacings for variable spacer models, additional..... ....$20.00

OLIVER

Made by the Oliver Typewriter Company. *General offices, 159 North Dearborn Street, Chicago, Illinois. Sold direct by mail and through specially appointed dealers and agents.*

PRINCIPALLY EMPHASIZED FEATURES



1. All advantageous, original Oliver features incorporated in over one million machines of previous models manufactured for 28 years, including the distinctive arch construction and actuating principle of the type bar.
2. Various size carriages interchangeable by the operator.
3. Increased speed with noise reduced to the minimum consistent with efficiency.

SPECIFICATIONS

General Features: Standard size, down stroke, double (carriage) shift, visible writing. Placed on the market in July, 1922.

Keyboard: Three rows, 28 keys writing 84 characters; right and left hand shift keys and shift lock; tabulator key and separate right and left margin release keys, situated directly above the top row of keyboard.

Carriage: Interchangeable, mounted on roller bearings; standard correspondence model, takes paper 10½ inches wide, writing a line 9 inches long; rotary escapement; paper feed rolls extend entire length of carriage; inbuilt tabulator operated from single key above keyboard. Line space and carriage return operated from left platen knob with an adjustment for single, double and triple line spacing and ratchet release. Back spacer operated from lever on right side of machine; variable line spacer; adjustable paper fingers.

Printing Mechanism: Type bars of distinctive "U" shape or arch design are mounted on either side of the printing point, held at both ends of the axis and strike downward on the platen.

Two-color, nine-sixteenths inch ribbon with automatic reverse and stencil throw-off. An indicating device denotes the exact printing point, moving out of the way with the downward stroke of the type bar.

Construction: Enclosed base. Inbuilt noise-reducing features. Type faces: Pica, elite, medium Roman or print-type.

Models and Prices

Model No. 11 with 11-inch carriage, taking paper 10.5 inches, writing line 9 inches..... $75.00

Model No. 11 with 12-inch carriage, taking paper 12 inches, writing line 10.45 inches..... 80.00

Model No. 11 with 15-inch carriage, taking paper 14.5 inches, writing line 13.25 inches 85.00

Model No. 11 with 18-inch carriage, taking paper 17.82 inches, writing line 16.60 inches..... 90.00

Any carriage narrower than the one originally supplied, can be substituted at any time. Any carriage wider than the one originally supplied, can also be substituted at any time but must have a wider rail.

REMINGTON

See also Portable Typewriters, Section No. 47-1.
Motorized Typewriters, Section No. 47-3.
Billing Machines, Section No. 7.
Bookkeeping Machines, Section No. 8.

Made by the Remington Typewriter Company. *Executive offices, 374 Broadway, New York City. Sold by their own sales force through branch offices in principal cities.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

The Remington line of typewriters now consists of four distinct types, (exclusive of Portable models described in Section No. 47-1, and Billing and Bookkeeping models described in Sections No. 7 and 8.):

1. Carriage-shift typewriters comprise models Nos. 12, 20 and 30.
2. Basket-shift model No. 50.
3. The Remington-Noiseless model No. 6.
4. Motorized models described in Section No. 47-3.

Carriage-Shift Models

Every fundamental feature found advantageous and successful in previous Remington typewriters, is contained in machines of the type.

In-built buffers and felt insulated side plates greatly reduce the noise of typing.

A double-coiled wire spring anvil accelerates the return action of the type bar, cushions the blow and preserves alignment by preventing the imbedding of the segment by type bars of the keys most used. This anvil is adjustable and renewable.

The "Natural Touch" is afforded by equalized key tension throughout the entire keyboard. It is the scientific adjustment of the key action to conform to the natural muscular movements of the human hands.

MODEL NO. 30

Left: MODEL NO. 12

All models of this type are similar in construction, following the specifications hereinafter given. They differ only in their operating controls, as follows:

Model No. 12 is usually sold for correspondence and general utility use. It is equipped with a single tabulator key which permits the setting of the carriage at different selected starting points on the line, without the necessity for any hand adjustments. This key has a number of important uses, among the principal being the indenting of lines in ordinary correspondence.

Model No. 30 is the standard model for form, tabular and statistical work. In addition to the features which are standard on machines of this type, it has a decimal tabulator, operated from ten keys mounted above, and parallel to the top row of letter keys. It is also equipped with side and end paper guides to insure accuracy of paper registration.

Model No. 20 is also known as the "Remington Special". It is identical with Model No. 30, except that it has a special palm tabulator, (a lever located on the frame to the left of the keyboard, affording a quick and convenient means of actuating the tabulator, by touching the lever with the palm of the left hand). The decimal tabulator is located below the keyboard, at the front of the machine, instead of being in-built, as on Model No. 30; the keys being pushed-in to operate instead of being depressed. This arrangement of the tabulator control is generally preferred when the machine is to be used for billing and similar purposes.

SPECIFICATIONS

Models No. 12, 20 and 30

General Features of all models: Standard size, front stroke, single shift (carriage shift), visible writing.

Keyboard: Four rows, 42 keys, writing 84 characters; right and left hand shift keys, with left hand shift lock and release; tabulator keys located as stated above for each model; back spacer and margin release keys.

Carriage: Mounted on roller bearings; standard carriage takes paper 10½ inches wide, writing line 8.1 inches long; rotary escapement. Two sets of unit feed rolls with release lever. Model No. 12 has an in-built single key tabulator with adjustable stops set instantly from the front of the machine, used for indentations on letters, etc. Models No. 30 and 50 have ten-key decimal tabulators.

Right or left hand line space levers, (right hand is standard), with adjustment for one, two or three line spacing; also throw-off to allow platen to revolve freely; back space mechanism operated from key on keyboard; right and left margin stops, two sets on each side (for double margins on legal forms, etc.), with lock to prevent over-printing at the end of line; lateral paper guide; adjustable paper fingers; marginal release located on front of carriage; variable line spacer on right end of cylinder is operted by one hand only.

Printing mechanism: Type bars are of steel, corrugated, with case hardened type and heels to prevent battering, mounted on a removable, renewable and adjustable bearing, in a one-piece slotted segment; type guide at printing point.

A feature is an adjustable and renewable double-coiled wire spring anvil superseding the cast anvil. The mechanical properties of this type of anvil provide acceleration of the return stroke of the type bar, cushions the blow, and preserves alignment by eliminating the imbedding usual on cast anvils, at the point of contact of the most used type bars.

Two-color ½-inch ribbon, with automatic reverse and cut-out for stencil work.

Construction: Cast frame, equipped with felt insulated side plates. All metal parts not enameled or nickeled are rustproofed.

Type faces: Pica, medium Roman, elite or Gothic. Several special faces, including bulletin size Gothic, are also supplied.

Prices
[Models No. 12, 20 and 30]

CARRIAGE SIZE	LENGTH OF WRITING LINE	MAXIMUM PAPER SIZE	OVER ALL WIDTH	PRICE MODEL 12	PRICE MODELS 20 AND 30
A	8.1″	10.5″	15″	$102.50	$122.50
B	9.5″	12.0″	17″	107.50	127.50
C	12.0″	14.5″	19.5″	112.50	132.50
D	16.0″	18.5″	23.5″	130.00	150.00
E	22.0″	24.5″	29.5″	155.00	175.00

[For models equipped with motorized carriage return, see Section No. 47-3.]

Basket-Shift Model

Model No. 50 is a special Remington product, differing in design and construction from the previously described models.

The basket-shift, whereby the carriage is stationary and the entire type section shifts for writing capitals, is a more desirable structural arrangement when wide carriages are required for the writing of wide forms. Instead of the necessity of lifting the weight of the heavy carriage, the type basket only is shifted for upper case letters, the weight-lift being the same on a wide carriage machine as it is on a standard correspondence model, since in either case the weight of the type section does not vary.

This model has on over-size cylinder, 1¾ inches in diameter; a positive ribbon mechanism with four ribbon adjustments, and a pleasing touch.

This model has 42 keys, writing 84 characters. It is furnished either with or without the key-set decimal tabulator, and in seven carriage widths, as follows:

SPECIFICATIONS

The detailed specifications of the above model are in all important respects the same as those of the Smith Premier typewriter, described in this Section.

Prices
[Model No. 50]

SIZE	LENGTH OF WRITING LINE	MAXIMUM PAPER SIZE	OVERALL WIDTH	PRICE WITH TABULATOR	PRICE WITHOUT TABULATOR
A	8.6″	10.6″	14¾″	$122.50	$102.50
B	10.1″	12.1″	16″	127.50	107.50
C	12.6″	14.6″	19″	132.50	112.50
D	16.6″	18.6″	23¾″	150.00	130.00
E	20.6″	22.6″	26¾″	175.00	150.00
F	24.6″	26.6″	30¾″	185.00	160.00
G	30.6″	32.6″	37″	200.00	175.00

Type faces: Pica, medium Roman, elite and Gothic.

Remington-Noiseless

The new model No. 6 Remington-Noiseless typewriter, with a four-row standard keyboard, was placed on the market in March 1925, replacing the former Model No. 5, which had a three-row keyboard.

It represents the first four-row keyboard machine constructed on the noiseless principle, ever commercially manufactured.

It writes 84 characters, but has only 22 type bars. Twenty of the type bars, (all except the end bar on each side) carries upper and lower case of two different characters, and each is actuated by two different keys. The keys control each type bar to present either the upper or lower case of its particular character. In action the type bar moves horizontally to the printing point, or describes a downward curve, ac-

REMINGTON-NOISELESS NO. 6

cording to which key is then controlling it. The carriage shifts for capitals.

The construction provides for permanent and constitutionally quiet operation; the machine may be operated anywhere without the distraction and irritation so commonly caused by the usual noise of typewriter operation.

Printing is accomplished by pressure, instead of by the hammer blow, usual on other machines, making the operation permanently noiseless. The distance which the type bar travels is limited by the length of the type action itself, and is so fixed that each type just reaches the paper.

Through a combination of leverage, impelled by the momentum of a weight attached to each type bar, the momentum set-up by the rapid movement of the type bar to the paper, exerts a very strong pressure, sufficient to make a perfect impression on the original and produce the usual number of carbon copies.

Printing is modified and the degree of pressure controlled by a fore-and-aft adjustment of the platen, adjusted by a graduated micrometer dial, located on the front of the machine just above the keyboard. The adjustment decreases or increases minutely the distance between the platen and the typeface, at the end of the type bar stroke. Thus the pressure may be varied according to the number of carbon copies required, or to control the density of the impression on the original. By this construction it is unnecessary to increase the force of the key stroke to make multiple carbon copies.

The platen is rubber (the platen on previous Noiseless models was steel).

SPECIFICATIONS

General Features: Standard size, thrust stroke, single shift (carriage shift), visible writing. This model (No. 6) was placed on the market in March, 1925, and supersedes all previous Noiseless 3-row keyboard models, which are no longer manufactured.

Keyboard: Standard, four-rows, 22 keys writing 84 characters. Has only 22 type bars of which 20 are each controlled by two keys. Right and left hand shift keys, with shift lock for each. Back space, tabulator and release keys situated on keyboard.

Carriage: Mounted on ball bearings; takes paper in widths for each size as shown below. Full drop speed escapement. Practically continuous feed rolls extending along platen, with spring tension lever to control cards and heavy form work without slipping; left hand line space lever with adjustment for one, two and three line spacing and platen ratchet release; right and left margin stops; paper bail designed to provide means of writing to extreme bottom of sheet; variable line spacer operated by left hand; adjustable lateral paper guide; paper release key on left side of carriage; right and left hand carriage release levers; single-key tabulator operated from key on keyboard. The tabulator stops are on a separate rack, hence do not interfere with margin stops.

Printing Mechanism: Type bars are of steel with a projection to prevent battering and are instantly removable without special tools. Type guide at printing point, locking type against vertical and horizontal vibration.

Two-color ½-inch ribbon, with automatic reverse and cut-out for stencil work.

Construction: Cast frame; enclosed design; dust-proof. Type faces, elite, pica, medium Roman, Gothic.

Prices

[Remington-Noiseless]

CARRIAGE	PAPER SIZE	WRITING LINE	PRICE
*A	10¾"	9"	$150.00
B	12¾"	11"	155.00
C	14¾"	13"	160.00
D	18¾"	17"	165.00

* denotes standard correspondence model.

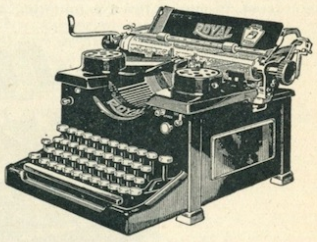
ROYAL

See also Portable Typewriters, Section No. 47-1

Made by the ROYAL TYPEWRITER COMPANY, INCORPORATED. *Executive offices, 316 Broadway, New York City. Sold by specially appointed dealers and their sales force.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

PRINCIPALLY EMPHASIZED FEATURES



1—A light, responsive, elastic key action and a mechanical cushion effect produced in the key levers, secured by the design of the "accelerating type bar mechanism." As the depression of the key lever progresses, the ratio of speed of the type bar is increased.

2—The construction of the type action of the special Quiet Model is such that at a point a short distance (approximately 15 degrees) from the platen, the driving leverage is lost by passing over a center, allowing the type bar to travel by its attained momentum to the paper. The absence of an anvil on the segment eliminates noise of impact, and all other sounds of operation are muffled down to a minimum. There is an increased lightness and elasticity in the touch. The result is a positive uniformity of impressions with a maximum of speed and a minimum of noise.

3—Triple service; letter writing, card typing and billing without extra attachments and without change of adjustments.

SPECIFICATIONS

Master Model No. 10

This improved model was first placed on the market in September, 1921, and supersedes various other models manufactured since 1908.

General Features: Standard size, front stroke, single shift (carriage shift), visible writing.

Keyboard: Four rows, 42 keys, writing 84 characters, right and left hand shift keys, with left hand shift lock and double releases; back space key and tabulator key situated on keyboard; touch adjustable by operator by thumb screw (located underneath machine) affecting the tension of all operating keys at once.

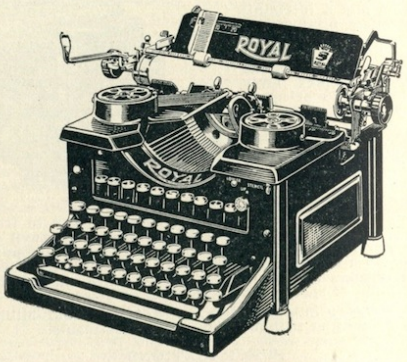
Carriage: Mounted on drop forged, hardened steel rails, with ball bearings operating inside pinions meshed with a geared track; takes paper 11 inches wide, writing line 9 inches long; roller contact (anti-friction) rotary escapement of exclusive design; unit tabulator operated from key on keyboard; left hand line space lever, with adjustments for single, double and triple line spacing; also with ratchet throw-off; carriage release levers at each end of carriage; back space mechanism operated from key on keyboard; right and left hand margin stops with line lock to prevent over printing at end of line; margin release, operated from key on front panel above keyboard; positive locking, variable line spacer on left twirler knob; single rear and unit front feed rolls with release lever; built-in card device, with overhead bail and adjustable margin and tabulator stops. Positive locks operate automatically to hold carriage in upper or lower position during travel of type bar to prevent high or low mis-alignment. The weight of the shift is balanced.

Printing Mechanism: Type bars corrugated, mounted in one piece segment with single type bar pivot; accelerating type bar action increases the ratio of speed of the type bar as the key is depressed, insures speed and adds to manifolding power; projection on each type bar prevents battering of type faces by striking against each other; one piece type guide.

Two-color ½-inch ribbon with automatic reverse, and cut out for stencil work; positive stops to prevent portion of any character being printed in a second color.

General Construction: Cast frame, with glass side plates, designed to reduce noise in operation; dust shields located over the type bar pivots, over bearings and other delicate parts.

Decimal Tabulator: In April 1925 the manufacturers announced that a decimal tabulator would be built into all new machines on order. This device is operated from ten keys mounted above the standard keyboard; the key action being of the same tension as the letter keys. It is built, as ordered, in one of the five following arrangements:



DECIMAL TABULATOR MODEL

No. 1, with keys marked for proper column spacing when commas are used to separate columns of an amount; No. 2, without allowance for commas; No. 3, without allowance for decimal point; English No. 1, with both sterling and comma scale; English No. 2, with sterling scale but without provision for commas.

Quiet Model

The Quiet Model is the same in all general features as the Master Model above described, except for a change in the design of the type bar action,

and a lighter touch (as described on preceding page), designed to increase speed and reduce the noise in operation.

Prices

Model No. 10	(Standard Model)	$102.50
Model No. QX	(Quiet Model)	105.00
Model No. X-12, takes paper 13″	wide, writes line 11″ long	107.50
Model No. X-14, takes paper 15″	wide, writes line 13″ long	112.50
Model No. X-18, takes paper 19″	wide, writes line 17″ long	122.50
Model No. X-20, tapes paper 21″	wide, writes line 19″ long	150.00
Decimal tabulator on any model, extra		20.00

Type Faces: Pica, elite, medium Roman, elite or pica single or double Gothic, medium roman single Gothic.

L. C. SMITH

See also Corona Portable Typewriter, Section No. 47-1.

Made by L. C. Smith and Corona Typewriters, Incorporated. *Executive offices, Syracuse, New York. Sold through branch offices and by specially appointed dealers and their sales forces.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

PRINCIPALLY EMPHASIZED FEATURES

1—Ball bearings; in type bar (each type bar mounted on 15 balls); in shift; in carriage runways and every other important functional part.

2—Shifting type segment (the carriage remains stationary and the type bar section raises for capitals) provides lighter shift, uniform on regular or wide carriage models.

3—Interchangeable platen affording the use of platens of different degrees of hardness according to the number of copies desired. Platens are also provided for card writing and other kinds of work.

4—Choice of right or left hand carriage return. Right hand return is standard equipment.

5—Inbuilt, 5-key decimal tabulator.

6—Operation with minimum of noise consistent with meeting complete functions of a typewriter.

Note: *For attachments for special work, see the following:*
Section. No. 4: Address Stencil Writer.
Section No. 49: Visible Index Card Writing Attachment.

SPECIFICATIONS

Models No. 7 and No. 8

Models No. 7 and No. 8 are the same machine except that Model No. 7 has 38 keys writing 76 characters; Model No. 8 has 42 keys writing 84 characters. Both models have been on the market with improvements added from time to time, since 1915, superseding other models marketed since 1904.

General Features: Standard size, front stroke, single (basket) shift, visible writing.

Keyboard: Four rows, 42 keys (on Model No. 8) writing 84 characters, or 38 keys (on Model No. 7) writing 76 characters; right and left hand shift keys, equipped with left hand shift lock and releases; back space key, margin release key; five tabulator keys, and color control ribbon key, all situated on keyboard. Touch is adjustable (by mechanic only).

Carriage: Mounted on ball bearings; takes paper 10½ inches wide, writing line 8½ inches long; platen interchangeable easily and quickly; escapement, provides for half spacing for use in inserting an omitted letter; double sets of unit feed rolls; built-in decimal tabulator operated from

five keys mounted above top row of keyboard; line space lever can be located at option of purchaser for right or left hand operation, and is provided with adjustments for single, double or triple line spacing; also with throw-off to allow platen to revolve freely; carriage release levers at each end of carriage; back space mechanism operated from key on keyboard; right and left margin stops with line lock to prevent over printing at end of line; line indicator; variable line spacer; adjustable paper fingers holding paper to allow typing to end of sheet; lateral paper guide.

Printing Mechanism: Type bars (corrugated) mounted on fifteen ball bearings in a basket segment, having adjustments for take up of wear; projection on each type bar and construction, prevents battering of type by striking against each other or on metal paper fingers; type guide.

Two-color, ½-inch ribbon, operated by carriage main spring, equipped with both automatic and hand reverse, with cut out for stencil work.

General Construction: Cast frame, open design; buffers or silencers are placed at noise centers to reduce noise to a minimum; ball bearings in type bars, carriage bearings and capital shift bearings, adjustable to take up wear.

Type Faces: A wide variety of all popular styles.

Prices of all Models

Model No. 7	Correspondence model, 76 characters	$100.00
Model No. 8—10″	Takes paper 10½″ wide, writes line 8½″ long	105.00
Model No. 8—12″	Takes paper 12½″ wide, writes line 10½″ long	110.00
Model No. 8—14″	Takes paper 14½″ wide, writes line 12½″ long	117.50
Model No. 8—18″	Takes paper 18½″ wide, writes line 16½″ long	132.50
Model No. 8—20″	Takes paper 20½″ wide, writes line 18½″ long	150.00
Model No. 8—26″	Takes paper 26½″ wide, writes line 24½″ long	160.00

[*For L. C. Smith typewriters equipped for writing on Visible Record System cards, see Section No. 49.*]

SMITH PREMIER

Made by the SMITH PREMIER TYPEWRITER COMPANY. *General offices 376 Broadway, New York City. Sold through their own sales force and specially appointed representatives.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

PRINCIPALLY EMPHASIZED FEATURES

1—Open-face construction without the obstruction of bars or rods, affording visibility and accessibility.

2—Extra size platen (1¾ inches in diameter) provides a better grip on the paper and adds to the life of the platen.

3—Designed in all its parts and action for the highest possible speed with a minimum of energy and effort on the part of the operator.

4—Type bar segment shifts for capitals; the carriage moves only from side to side. The weight to be shifted is constant regardless of the carriage, lessening fatigue and increasing speed.

In April 1925, several changes and refinements in the interior construction of the machine were made, including a redesigned escapement mechanism preventing escapement from operating when the line lock is engaged; a redesigned universal bar mechanism, insuring against skipping; a redesigned space bar mechanism, providing for the adjustment of the escapement mechanism to operate at any desired point in the depressing of the space bar; the intermediate lever between the key levers and type bars are now constructed to produce clearer and firmer impressions and to provide a pleasing touch; ribbon

mechanism operated by action of key levers to insure even wear of ribbon.

SPECIFICATIONS

General Features: Standard size, front stroke, single (basket) shift, visible writing; open face construction. Put on the market in 1923, this machine is a development and improvement upon the Monarch typewriter manufactured and sold extensively for years by the Remington Typewriter Company. The most quickly recognized improvement is that the type bars are mounted in a solid slotted segment, whereas the Monarch had individual type bar hangers.

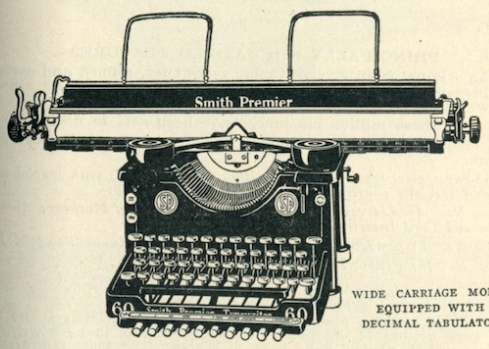
Keyboard: Four rows; Model No. 60 has 46 keys writing 92 characters including eighth fractions; Model No. 50 has 42 keys writing 84 characters; right and left hand shift keys with shift lock and release; back spacer keys; tabulator key and margin release key situated on the right of the front panel above the keyboard.

Carriage: Suspended between race rails with six steel roller bearings, contained in a geared roll separator. Correspondence model takes paper 10.6″ wide, writes line 8.6″ wide. Tabulator is a special equipment of the ten-key decimal design. Left hand line space lever with adjustment for single, double or triple spacing and ratchet throw-off; back spacer operated from key on keyboard; right and left hand margin release levers with line lock; paper ball with movable rolls or adjustable paper fingers; variable line spacer.

Printing Mechanism: Basket shift mounted on eight steel roller bearings in hardened V-shaped raceways with flat, hardened steel, corrugated type bars mounted in a solid slotted segment with a stroke stop ring. Type bars have heels to prevent battering. Type guide at printing point.

Two-color, ½-inch ribbon with four position adjustment; one position for each color of two-color ribbon, stencil cutting position and a serpentine movement for one-color ribbon to insure the use of the entire ribbon. Automatic reverse operated by the action of the key levers.

Construction: Open face, designed for speed of operation; frame is enclosed with dust panels. Regularly furnished with pica, elite, medium Roman or Gothic typefaces.



WIDE CARRIAGE MODEL EQUIPPED WITH DECIMAL TABULATOR

Models and Prices
Models No. 50 and 60

CARRIAGE	WIDTH OF PAPER	WRITING LINE	CORRESPONDENCE MACHINE	TABULATING MACHINE
A	10.6	8.6	$102.50	$122.50
B	12.1	10.1	107.50	127.50
C	14.6	12.6	112.50	132.50
D	18.6	16.6	130.00	150.00
E	22.6	20.6	150.00	175.00
F	26.6	24.6	160.00	185.00
G	32.6	30.6	175.00	200.00

UNDERWOOD

See also Portable Typewriters, Section No. 47-1.
Billing Machines, Section No. 7.
Bookkeeping Machines, Section No. 8.

Made by the UNDERWOOD TYPEWRITER COMPANY, INCORPORATED. *General offices, 30 Vesey Street, New York City. Sold by their own sales force through branch offices located in principal cities.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

MODEL NO. 5

PRINCIPALLY EMPHASIZED FEATURES

1. The original front stroke, visible typewriter, refined and perfected to its present day construction which is claimed to be the standard of the world.
2. Nearly three million machines have been sold to date.
3. A long record of speed contests won by amateur and professional operators.

NOTE: *For special typewriters comprising regular models with special attachments, and specially constructed models, see the following:*

Section No. 4: Address Stencil Writer; Label Writing Machine; Automatic Envelope and Card Inserter.

Section No. 7: Condensed Billing Typewriter; Continuous Fan-fold Biller.

Section No. 49: Visible Index Card Writing Machine.

SPECIFICATIONS

Models No. 4 and No. 5

Models No. 4 and No. 5 are the same machine except that Model No. 4 has 38 keys writing 76 characters; Model No. 5 has 42 keys writing 84 characters. Both models have been marketed since 1900, improvements having been added from time to time.

General Features: Standard size, front stroke, single shift (carriage shift) visible writing.

Keyboard: Four rows, 38 keys (on Model No. 4) writing 76 characters, or 42 keys (on Model No. 5) writing 84 characters; right and left hand shift keys, with shift lock operating in connection with right hand shift key; tabulator key and back spacer key located on keyboard, margin release key located above left side of keyboard; individual key tension.

Carriage: Mounted on ball bearing rollers; takes paper 10½ inches wide; writing line 8 inches long; instantaneous lock on upper and lower case;

rotary ball bearing escapement with pivot point bearings for loose and rigid dogs, designed to prevent crowding, piling or skipping of letters; built-in tabulator with automatic brake, unit style operated from single key on keyboard; left hand combination carriage return and line space lever with adjustments for one, two or three line spacing, and release to allow free rotation of platen; right hand paper release lever; back space mechanism operated from key on keyboard; right and left margin locks operated from front of carriage in connection with computing scale for visible centering of all lines; right side lock, equipped with bell signal warning, prevents type from striking when end of line has been reached; line indicator scale (called cylinder scales) on each side of printing point, raise and lower with platen when carriage is shifted; variable line space mechanism attached to left side platen knob; lateral paper guide attached to paper table; front sliding paper fingers; pressure lever for holding envelopes or cards flat while imprinting.

Printing Mechanism: Type bars of flat hardened steel, corrugated with projection on end to prevent battering; mounted in a one-piece slotted segment with front and rear dust guard; stop ring on segment provides uniform impressions and steady alignment; type bars may be removed easily and replaced, singly, without disturbing any others; type guide enforces correct alignment by guiding and locking type bar in printing position.

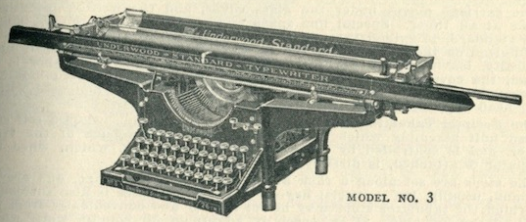
Two-color ½-inch ribbon, mounted in vibrator at printing point; with automatic reverse and throw-off for stencil cutting.

General Construction: Cast base, open design.

Type faces furnished are pica, elite, medium Roman, elite Gothic, pica Gothic, and medium Roman Gothic.

Model No. 3

Wide carriage machines, (12″ to 26″) with keyboard the same as Model No. 5.



MODEL NO. 3

Special Models

Two types of devices are furnished for attachment to any standard model Underwood typewriter, to deaden the noise of operation:

QUIET APPLIANCE

DECIMAL TABULATOR

SOUNDPROOF CABINET

The Quiet Appliance consists of sound-muffling metal panels for attachment to the open portions of the base and frame, to enclose the sides, back and bottom of the typewriter. The feet of the typewriter rest on a felt pad which prevents resonance from the table or desk top.

The Soundproof Cabinet is a metal and glass cabinet, constructed in accordance with the science of acoustics, to deaden sound, which fits over and completely encloses the typewriter, with the exception of the carriage levers and the keyboard. It is dustproof.

The carriage moves under the glass cover, and the writing is entirely visible at all times. Special line space and carriage release levers, longer than standard, to extend through the cabinet, are furnished. The pressure of a button on the left front of the cabinet causes the cover to open automatically, leaving every working part accessible. When the paper is inserted, the cover may be closed and the typewriting completed before it is necessary to reopen the cover to remove the sheets. When used with a drop head typewriter desk, a special base is supplied.

The Decimal Tabulator may be attached to any model. It is a self contained unit assembly which is mounted under and in back of the typewriter, and is controlled by ten keys located in a row, which, when the tabulator is attached, is directly under the space bar.

The stops are set along a rack at the back of the carriage, and are set by hand, usually, but a special **key-set decimal tabulator** is also furnished, by which the tabulator stops may be set rapidly and conveniently from the front of the machine. It is especially adaptable for column work where forms of different set-up are used. By depressing a stop setting key, the stop is set for the space at which the carriage is stopped at that time. A restoring plate restores all stops to an inoperative position when the set-up is no longer wanted.

[*For Underwood typewriters equipped for writing on Visible Record System cards, see Section No. 49; equipped for writing addressing machine stencils, see Section No. 4.*]

Prices all Models

Model No. 4	$ 97.50
No. 5	102.50
No. 3—12", takes paper 12" wide, writes line 10½" long	107.50
No. 3—14", takes paper 14" wide, writes line 12" long	112.50
No. 3—16", takes paper 16" wide, writes line 14" long	122.50
No. 3—18", takes paper 18" wide, writes line 16" long	132.50
No. 3—20", takes paper 20" wide, writes line 18" long	150.00
No. 3—26", takes paper 26" wide, writes line 24" long	160.00

AUXILIARY EQUIPMENT

Quiet appliance	$10.00
Sound proof cabinet: For models No. 4 and 5	50.00
For models No. 3-12 and 3-14	70.00
Decimal tabulator: Regular	20.00
Key-set, for models No. 4 and 5	30.00
For other models, up to 3-26, depending on length of carriage	$31.50 to 40.00

Envelope and card inserter, (see description in Section No. 4)	11.50
Paper roll attachment for addressing labels fed from a continuous roll, (see description in Section No. 4)	14.00

Other minor attachments are also furnished, such as for feeding and holding cards in position for typing; for writing railroad way bills; for writing insurance policies, etc. The manufacturers or the EQUIPMENT-RESEARCH CORPORATION will furnish those interested with complete details.

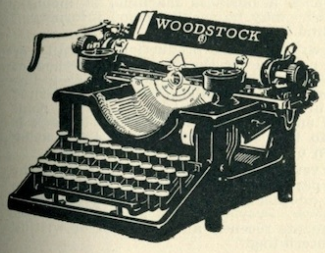
Note: The prices above given for Auxiliary Equipment are somewhat higher than those charged when such equipment is furnished attached when the typewriter itself is ordered.

WOODSTOCK

See also Motorized Typewriters, Section No. 47-3.

Made by the WOODSTOCK TYPEWRITER COMPANY. *General offices and factory, Woodstock, Illinois. Sold direct by their own salesmen and through specially appointed dealers and distributors.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



PRINCIPALLY EMPHASIZED FEATURES

1—Built on the unit system having a single casting each for (1) the base, (2) the top plate, and (3) the carriage, each carrying its own essential working parts.

2—Light action, open face construction, speedy in operation, quiet to the point of best operation and efficiency, and other features desirable on a standard typewriter.

SPECIFICATIONS

General Features: Standard size, front stroke, single (carriage) shift, visible writing. Placed on the market in 1916, supersedes other models manufactured since 1914.

Keyboard: Four rows, 42 keys writing 84 characters; right and left hand shift keys, with left hand shift lock and release; back space, tabulator and margin release keys, located on keyboard. Tension is adjustable to the individual touch.

Carriage: Mounted in dirt proof rails on eight ball bearings. Standard correspondence model takes paper 11⅞ inches wide, writing line 9½ inches long. High speed rotary escapement; unit feed rolls. Tabulator is of the single key, inbuilt design, operating from key on keyboard and equipped with shock absorbing device on standard width carriages, and also with brake on wide carriages. Left hand line space lever with adjustment for single, double and triple spacing and ratchet release. Right and left margin release levers; back spacer operated from key on keyboard. Paper table tilts forward, affording access and visibility in setting tabulator margin stops in front of machine. Lateral paper guide; paper fingers have slide adjustment and are hinged at bottom. Scale indicator and line finding scale; inbuilt card holder is standard equipment. Variable line spacer of distinctive construction is a secondary knob operating through, but working entirely independent of, the regular left hand platen knob.

Printing Mechanism: Type bars are pivoted in a one-piece type bar segment, having an abutment or striking ring against which the bars end their printing stroke, to provide uniform printing impressions and prevent pitting of platen. Type bars are provided with protecting heels to prevent battering of type faces. Type guide at printing point. Type bar bearings are adjustable. All type bars are of the same length, and have three actuating parts.

Two-color, $\frac{5}{16}$ inch ribbon with automatic reverse, actuated by a single stroke of any character key; stencil cut-out.

Envelope and card inserter, (see description in Section No. 4)..... 11.50
Paper roll attachment for addressing labels fed from a continuous roll, (see description in Section No. 4)..... 14.00

Other minor attachments are also furnished, such as for feeding and holding cards in position for typing; for writing railroad way bills; for writing insurance policies, etc. The manufacturers or the EQUIPMENT-RESEARCH CORPORATION will furnish those interested with complete details.

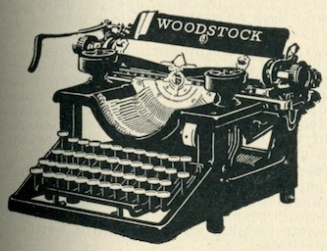
Note: The prices above given for Auxiliary Equipment are somewhat higher than those charged when such equipment is furnished attached when the typewriter itself is ordered.

WOODSTOCK

See also Motorized Typewriters, Section No. 47-3.

Made by the WOODSTOCK TYPEWRITER COMPANY. *General offices and factory, Woodstock, Illinois. Sold direct by their own salesmen and through specially appointed dealers and distributors.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



PRINCIPALLY EMPHASIZED FEATURES

1—Built on the unit system having a single casting each for (1) the base, (2) the top plate, and (3) the carriage, each carrying its own essential working parts.

2—Light action, open face construction, speedy in operation, quiet to the point of best operation and efficiency, and other features desirable on a standard typewriter.

SPECIFICATIONS

General Features: Standard size, front stroke, single (carriage) shift, visible writing. Placed on the market in 1916, supersedes other models manufactured since 1914.

Keyboard: Four rows, 42 keys writing 84 characters; right and left hand shift keys, with left hand shift lock and release; back space, tabulator and margin release keys, located on keyboard. Tension is adjustable to the individual touch.

Carriage: Mounted in dirt proof rails on eight ball bearings. Standard correspondence model takes paper 11⅞ inches wide, writing line 9½ inches long. High speed rotary escapement; unit feed rolls. Tabulator is of the single key, inbuilt design, operating from key on keyboard and equipped with shock absorbing device on standard width carriages, and also with brake on wide carriages. Left hand line space lever with adjustment for single, double and triple spacing and ratchet release. Right and left margin release levers; back spacer operated from key on keyboard. Paper table tilts forward, affording access and visibility in setting tabulator margin stops in front of machine. Lateral paper guide; paper fingers have slide adjustment and are hinged at bottom. Scale indicator and line finding scale; inbuilt card holder is standard equipment. Variable line spacer of distinctive construction is a secondary knob operating through, but working entirely independent of, the regular left hand platen knob.

Printing Mechanism: Type bars are pivoted in a one-piece type bar segment, having an abutment or striking ring against which the bars end their printing stroke, to provide uniform printing impressions and prevent pitting of platen. Type bars are provided with protecting heels to prevent battering of type faces. Type guide at printing point. Type bar bearings are adjustable. All type bars are of the same length, and have three actuating parts.

Two-color, $\frac{2}{10}$ inch ribbon with automatic reverse, actuated by a single stroke of any character key; stencil cut-out.

Construction: Unit construction, consisting of base, top plate and carriage each carrying its own essential working parts. Open design of frame and open face front contruction.

Models and Prices

Model No. 5N. Standard correspondence model, extra wide carriage, taking paper 11⅞" wide and writing a line 9½" long.....$102.50

Model 8-14". Has a carriage taking paper 14½" wide and writing a line 12.9" long $112.50

Model No. 8-18". Has a carriage taking paper 18½" wide and writing a line 17" long.....$150.00

Model No. 8-22". Has a carriage taking paper 22½" wide and writing a line 21" long $175.00

THE HALL BRAILLE TYPEWRITER

[For the Blind]

Made by the COOPER ENGINEERING AND MANUFACTURING COMPANY, INCORPORATED, *558-562 West Washington Boulevard, Chicago, Illinois.*

This machine, while in no sense a business machine, is included herein as information to those who may be seeking some information regarding typewriters for the blind.

It is a practical, portable typewriter for the production of Braille or New York point characters to be read by the finger tip method of touch by the blind. It takes paper 12 inches wide and writes a line 10⅝ inches long, the equivalent of 42 Braille cells. Any desired margin can be obtained by use of marginal stops. If New York point instead of Braille is to be written, a special interchangeable rack is used. The machine conforms to the .90 x .90 x .250 x .400 spacing recommended by the Commission on Uniform Type for the Blind.

Braille characters consist of very small points embossed from the back to the surface of a special paper. The arrangement of the points and the relation of one point to another in the cell or character block, denotes differences between letters. Previously one side of the sheet only could be used, but improvements recently added permit of writing on both sides of the paper by interlining.

The paper is inserted in a carriage similar to that on a standard typewriter, and moves as the keys are depressed. The keyboard consists of six keys, similar to the black keys on a piano, and a space bar.

Models and Prices

With aluminum frame, weight 9½ pounds.....$37.50
With iron frame, weight 12 pounds..... 35.00
Equipment to write New York point, as well as Braille..... 2.00
Carrying case 4.00

Special paper for use with this machine in lots of not less than 5 pounds, 20c per pound.

This company also manufactures stereotype machines, rotary printing presses, and map making machines for production of Braille literature.

NOTE: *The Hammond Typewriter Company also furnish a model of their machine, described in this Section, for writing Braille characters for the blind.*

Construction: Unit construction, consisting of base, top plate and carriage each carrying its own essential working parts. Open design of frame and open face front contruction.

Models and Prices

Model No. 5N. Standard correspondence model, extra wide carriage, taking paper 11⅜" wide and writing a line 9½" long.....$102.50

Model 8-14". Has a carriage taking paper 14½" wide and writing a line 12.9" long $112.50

Model No. 8-18". Has a carriage taking paper 18½" wide and writing a line 17" long.....$150.00

Model No. 8-22". Has a carriage taking paper 22½" wide and writing a line 21" long $175.00

THE HALL BRAILLE TYPEWRITER

[For the Blind]

Made by the Cooper Engineering and Manufacturing Company, Incorporated, *558-562 West Washington Boulevard, Chicago, Illinois.*

This machine, while in no sense a business machine, is included herein as information to those who may be seeking some information regarding typewriters for the blind.

It is a practical, portable typewriter for the production of Braille or New York point characters to be read by the finger tip method of touch by the blind. It takes paper 12 inches wide and writes a line 10⅝ inches long, the equivalent of 42 Braille cells. Any desired margin can be obtained by use of marginal stops. If New York point instead of Braille is to be written, a special interchangeable rack is used. The machine conforms to the .90 x .90 x .250 x .400 spacing recommended by the Commission on Uniform Type for the Blind.

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The paper is inserted in a carriage similar to that on a standard typewriter, and moves as the keys are depressed. The keyboard consists of six keys, similar to the black keys on a piano, and a space bar.

Models and Prices

With aluminum frame, weight 9½ pounds.....$37.50
With iron frame, weight 12 pounds..... 35.00
Equipment to write New York point, as well as Braille..... 2.00
Carrying case 4.00

Special paper for use with this machine in lots of not less than 5 pounds, 20c per pound.

This company also manufactures stereotype machines, rotary printing presses, and map making machines for production of Braille literature.

Note: *The Hammond Typewriter Company also furnish a model of their machine, described in this Section, for writing Braille characters for the blind.*

Motorized Typewriters

It may be considered as a reliable prediction that, responding to the popular approval of the business public, all prominent manufacturers will, in the near future, supply motorized typewriters.

Typewriters with motor equipment are not, as one might suppose in interpreting the term "Electric Typewriters", given them by the advertised announcements, a radical development, subject to experiment. Fortunately, those so far produced, utilize as the typing unit, time tried models of standard typewriters, into which have been built the necessary mechanism, driven by an electric motor, to actuate the type bars, and (according to the make) other operations.

The arrangement is intended to assist in the hand operation of the typewriter, and many operations it reduces to a minimum, or changes to a degree approximating replacement.

It should be understood that so called "Electric Typewriters" are really mechanically actuated, which mechanism is operated from a shaft driven by an electric motor. Electro magnets or electrical contacts are not employed. The same motor driven shaft also actuates the mechanism to shift the carriage, on machines so arranged, and to back space and return the carriage for the writing of the next line.

MECHANICAL PRINCIPLES

The extent to which the motor power is applied to actuate the several functions of the typewriter, such as shifting for capitals and returning the carriage, etc., differs as between makes. One make utilizes the motor to actuate the type bars only. Others are equipped to apply power to all operations of the machine, except the insertion of the paper and the actual designation of the character and control keys on the keyboard, which require but a very slight, and very light depression to cause the desired operation to function.

The mechanical principle employed in applying power, is approximately the same on all principal makes of motorized typewriters.

The motor rotates a shaft or roller at high speed, continuously. When a key is depressed it releases a latch which permits an actuator or cam, (of which there is one for each key), to fall against the serrations which extend in rows from end to end of the shaft; the cam is engaged and drawn with the shaft, thus setting up the motion, conveyed to the sub lever and type bar, to carry the type bar to the printing point.

The cam releases from the shaft and is thrown back into a home position when but part of the revolution of the shaft has been made.

In the case of those machines having a revolving roller, which is rubber covered, and is similar to a platen, the depression of the key on the keyboard releases a cam, (called a "lobe", of which there is one for each key), permitting its milled face to be engaged by the rubber surface of the roller, which causes the cam to make a half revolution, thus setting up the motion necessary to carry the type bar to the printing point. The cams are two sided, each side engaging on alternate operations.

Backspacing and shifting for capitals are actuated also by cams, the same as for letter characters. The carriage return is effected by the engagement of a planetary clutch, mounted on the main drive shaft. The controls for all operations are keys on the keyboard.

As compared with typewriters operated by unassisted hand power, it is interesting to note that typical motorized typewriters require a pressure of but one quarter of an ounce to two ounces to operate a character key, as against ten to fifteen ounces for the ordinary typewriter, and the key depression is less than one-tenth of an inch on the power driven machines, whereas it averages five-eighths of an inch on hand driven machines.

Whereas, in typing on a standard model typewriter, allowance is made to permit the type bar to return to its home position, and to

prevent striking another key causing the type bars to clash, the speed of return of the type bar, and the construction of the power mechanism on motorized typewriters is such that clashing of type bars is practically eliminated, and on one make, it is impossible to start another type bar before the previous one has returned to rest.

On motorized machines on which power is applied to raise the carriage for writing capitals, and to return the carriage at the end of a line and line space, the energy of the operator is greatly conserved. The shift keys on regular typewriters are, admittedly, harder to depress, and slower in operation than the character keys. The operation of returning the carriage and line spacing has been computed to require an average pull or push of five pounds. The operation of the keys controlling capital shift and carriage return, on motorized machines, requires no more energy than for the depression of the character keys.

ADVANTAGES OF MOTOR DRIVE

The speed of operation possible is so much beyond that ordinarily produced in the operation of standard typewriters, that its actual rate is rather difficult to appreciate without seeing.

Speed is not alone the result of the rapidity with which the mechanism operates. The operator is relieved of so much of the usual effort of typing that there is considerably less occasion for fatigue. High speed can be attained and sustained, the result being increased volume of daily production.

Besides the motions of operation and control are shortened, as for instance, the great reduction of depression of each key, and, on some machines, the centralizing of all control in the keyboard, eliminating the usual arm movements to return the carriage and line space. Hence greater speed in completing the necessary operating movements is natural.

The strength of impression necessary to make many carbon copies is uniformly extended to every type bar through the simple method of increasing the speed of the motor. The faster the type bar is made to travel to the paper, the harder will be its blow of impression. The control for this purpose is a small dial of a rheostat, mounted on the typewriter frame. Regardless of any adjustment of this dial, the key touch and depression remain unchanged.

No greater effort on the part of the typist is required to produce many carbon copies, than is applied to make one. In fact, the force of the blow on the keys is always uniform insofar as the operator is concerned, and beyond her control to vary. Each key is but a trigger which permits the uniform power of the motor to be applied equally to each type bar to make a uniform impression. If the touch is heavier than needed, the surplus energy is confined to the key lever and does not reach the type bar.

The result of this construction is completely uniform impression of all characters—perfect typewriting.

This same uniformity of impression may be expected to have an advantageous effect on the durability of the machine. The operation constantly being smooth and of measured force, results in an absence of strains and shocks to the mechanism, hence as long, if not longer production life may be expected from motorized typewriters as from standard writing machines.

The details of construction and operation are more fully related in connection with descriptions of each make. The cost of power required for operation is reported to be but a few cents per each machine per day.

HAMMOND

Made by the HAMMOND TYPEWRITER COMPANY. *Factory and general offices: 132nd Street at Brook Avenue, New York City. Sold through branches and specially appointed dealers throughout the world.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

The Hammond motorized typewriter was announced late in 1926. It comprises a standard model, described in detail in Section No. 47-2, to which has been attached an electric motor to actuate the hammer which, striking the paper from the rear, makes the impression.

The key depression is the same as on regular models, but is lightened by reason of the motor serving to pick up and carry the load required to actuate the hammer. This force is applied by the operator, through the keys, on regular models.

The motor starts automatically when the machine is put into use and stops automatically when the work is finished. A lever adjustment permits increasing the speed of the motor to two stages, in addition to normal, for manifolding work.

Price $150.00

HOOVEN

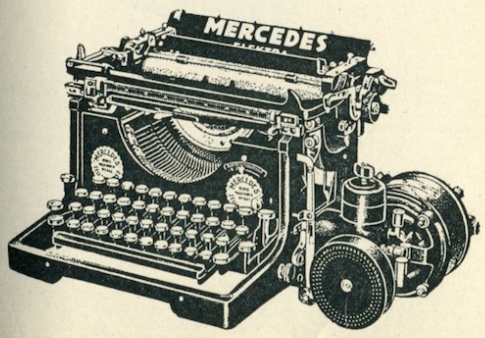
The Hooven Automatic Typewriter is designed for the production of form letters, at high speed and in quantities, without requiring any typing operations by the attendant.

The character type bars and all other controls are actuated by the movement of a perforated paper strip, similar to a piano roll, through the machine.

A complete description of the construction and operation will be found in Section No. 19-1.

MERCEDES ELECTRA

Made by MERCEDES BUROMASCHINEN-WERKE, *Zella-Mehlis 2, Thuringen, Germany. Pending organized representation in the United States, inquiries should be directed to the* RALPH C. COXHEAD CORPORATION, *53rd Floor, Woolworth Building, New York City.*



The motor power on this machine is applied to the type bars, the shift keys, the space bar, carriage return and line spacer.

The design and construction of the mechanism which actuates the type bars are similar to that of the Woodstock Electrite, herein described, in that the motor drives a serrated shaft, running from right to left under the machine, the ridges of which contact with actuators attached to the sub levers, when a latch is released by the depression of any key. The same shaft also drives the mechanism for the capital shift, space bar, and carriage return and line space lever.

A locking device prevents any type bar from being operated while another is in motion, thus preventing all possibility of clashing type bars or piling letters.

In operating the shift key, the carriage remains locked until the capital character has been typed, when it automatically returns to its normal position. It is not necessary that the shift key be held down. A shift lock is provided to permit the writing of a series of capitals. The carriage return is controlled from a key on the keyboard. Five stages of motor speed, to permit variation in force of impression for manifolding, are secured from an indicator knob.

The character and control keys have a depression of one-eighth of an inch, requiring a pressure of only one-quarter of an ounce.

The typing unit is a standard Model No. 4 Mercedes typewriter, which is of sectional construction, permitting it to be demounted in four assembled units consisting of the main frame which includes the ribbon mechanism, the type bar and sub lever section, the carriage frame and the platen.

The motor is mounted on the right side of the machine and runs continuously.

The same motorized principles are obtainable applied to the bookkeeping models of this typewriter.

The construction of the bookkeeping machine is similar to the Remington Model No. 23, described in Section No. 8. It is arranged to have vertical totalizers mounted on the carriage, and a cross computing register mounted on a truck at the right side of the machine, below the carriage rail.

REMINGTON ELECTRIC

Made by the REMINGTON TYPEWRITER COMPANY, *Executive offices, 374 Broadway, New York City. Sold by their own sales force through branch offices in principal cities.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

The Remington Electric typewriter is motorized as to the printing keys, the shift keys, the shift lock, the back spacer, the tabulator key and the carriage return and line space.

Mounted under the sub levers is a rubber covered cylinder, similar to a carriage platen, which is rotated at high speed by the electric motor.

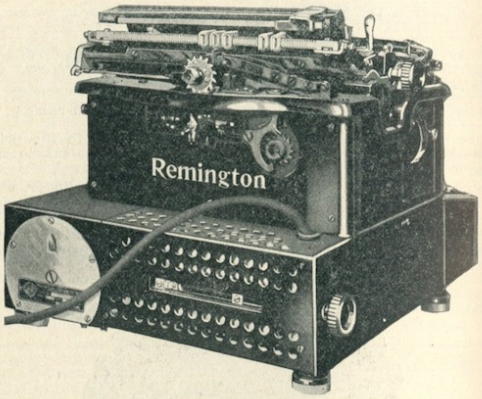
A series of cams, called lobes, one for each key on the keyboard, are mounted in a row, close to and parallel with the length of the power cylinder.

FRONT VIEW

When a key is depressed, a cam is released, permitting its milled edge to contact with the rubber surface of the cylinder, which draws the cam around one-half revolution, thus conveying the motion to the sub lever and type bar necessary to cause the type bar to strike the paper.

The same principle, employing other cams, actuates the capital shift, the back spacer and other motorized features, except the carriage return which is actuated by a clutch driven from the motor shaft. All operations are controlled from keys on the keyboard, and the carriage return and line space may be actuated automatically from the right margin stop.

The rows of keys on the keyboard are arranged on an almost even plane, thus differing from the usual stepped arrangement usual on ordinary typewriters. This flat arrangement is intended to induce higher speed of operation in conjunction with the key depression of one-tenth of an inch, requiring an operating force of two ounces.



REAR VIEW

An impression knob located at the rear of the left side of the machine, controls a rheostat to speed up the motor to any desired speed to increase the force of the type bar blow for manifolding purposes. The motor switch is located at the front of the right side frame.

The basis of the typewriter itself is the standard model No. 12, described and illustrated in Section No. 47-2.

The Remington Electric is so new a development that the plans of the manufacturers, as to whether or not the motorized feature will be extended to the printing keys of their billing and bookkeeping machines, described in Sections Nos. 7 and 8, have not been announced. Accounting machines as now furnished are equipped with motor carriage return.

Price, Remington Electric Typewriter, equipped with size A carriage, taking paper 10.5" wide, writing a line 8.1" long, for A. C. or D. C. current $200.00

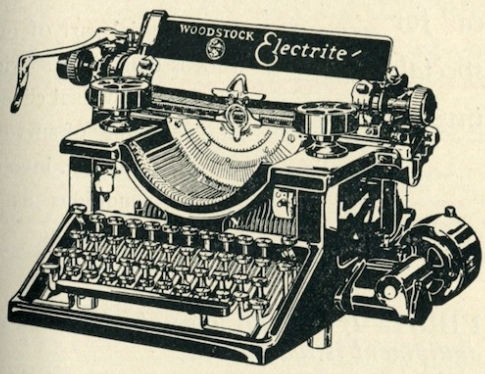
MOTOR CARRIAGE RETURN ON ORDINARY MODELS

Model No. 20, the Remington typewriter equipped with a palm tabulator for convenience in billing, which is described in Section No. 47-2, may be equipped with a motor carriage return, at a price of $50.00 additional to those prices shown for regular machines in Section No. 47-2 under Remington typewriter descriptions.

WOODSTOCK ELECTRITE

Made by the Woodstock Typewriter Company. *General offices and factory, Woodstock, Illinois. Sold direct by their own salesmen and through specially appointed dealers and distributors.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



The motorized functions of this machine extend to the keyboard keys and type bars.

Extending from left to right under the sub levers is a serrated shaft, which is rotated at high speed by the motor which is attached to the right side of the typewriter frame.

The typewriter is a standard model Woodstock, described in Section No. 47-2.

When a key on the keyboard is depressed it releases an actuator attached to the sub-lever for that key, permitting the actuator to fall against the revolving shaft, whereupon the actuator is engaged by one of the ridges which extends the length of the shaft, and is drawn forward, conveying motion to the sub lever and the type bar, necessary to cause the type bar to strike the paper. At a point part way in its revolution, the shaft automatically loses its engagement with the actuator, permitting it to return to a set position ready for the next stroke of its key.

The motor drive is not applied to any other functions of the machine.

A rheostat controlling the speed of the motor to impart a heavier blow by the type bars, for manifolding work, has five stages of adjustment.

Price, additional to prices of regular models described in Section No. 47-2 ..... $65.00

Typewriter Auxiliaries

Cushion Keys

Rubber and composition keys to be attached over the tops of regular typewriter and adding machine keys, are intended to remove eye strain, provide resiliency on the impact of the finger with the key and thus prevent fatigue on the part of the operator.

There is little to choose as between the different makes, except that some have concave tops to fit the fingers.

They may be purchased from stationers and office equipment dealers, or direct from the following manufacturers:

[*Brand name precedes firm name*]

"Lincoln" Lincoln Rubber Key Company, 27 Thames Street, New York City.

"Munson" Munson Supply Company, 23 City Hall Place, New York City.

"Magic Touch" The Park Company, 19 Park Place, New York City.

"Peerless" Peerless Key Company, 176 Fulton Street, New York City.

"Master" Speed Key Manufacturing Company, 20 Columbus Place, Brooklyn, New York.

Rubber Cushion Knobs and Rubber Feet

Cushion knobs slip over the hard rubber platen knobs of typewriters and adding machines to provide a softer and larger grip, particularly for operators with sensitive hands.

They may be purchased from stationers or office equipment dealers, or from the following manufacturers:

Ames Supply Company, 564-572 West Randolph Street, Chicago, Illinois.

Azora Rubber Company, 54th and 20th Streets, Cicero, Illinois.

George E. Fox and Company, 325 West Ohio Street, Chicago, Illinois.

Rubber cushion feet are designed to be slipped under the standard rubber feet on typewriters and are equipped with an air cushion which is intended to absorb some of the sounds created through the operation of the typewriter on a desk and to impart a more pleasing touch to the typewriter operation. They can be purchased from stationers and office equipment dealers, or direct from the above listed manufacturers.

Miscellaneous Attachments for Typewriters

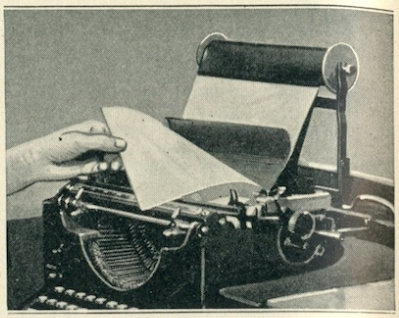
Different typewriter companies furnish attachments for special typing on their machines such as for cutting addressing machine stencils; injectors for the rapid injection and discharge of envelopes and cards for high speed addressing; card holding attachments for typing on the lower edge of cards used with visible record equipment; card holding attachments for making ordinary index cards lie close to the platen and not interfere with the ribbon movement when typing.

These different devices are described in the sections pertaining to the machines with which they are to be used and will also be found in the sections concerning addressing machines (No. 4) and visible record equipment (No. 49).

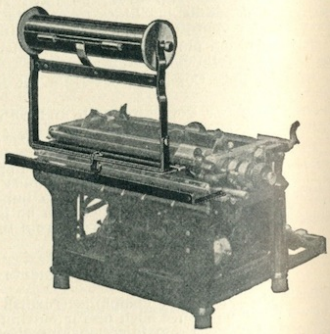
CHAMPION CARBON PAPER CONSERVER

Made by the Champion Conserver Company, *Dixie Terminal Building, Cincinnati, Ohio. Sold direct to the user.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



This device permits the use of carbon paper in roll form on any typewriter. Its purpose is to conserve the use of carbon paper by providing a means of regulating the length of carbon paper used, saving the part generally unused at the top and bottom of single sheets, and eliminating the waste due to sheets becoming creased and wrinkled by being placed in desk drawers after initial use, and thereafter discarded.



The operation of inserting the carbon paper between the letterhead and second sheets is speeded by the use of this device. Carbon paper is always in the same place, directly above the point where it is inserted into the typewriter, and when several copies are required, the removal of carbons is easier and quicker than if single sheets are used. The tendency to smudge and soil the fingers is reduced, because less handling is required.

The device is a light metal frame attached to the carriage of the typewriter and supported by a rail attached to the machine, which, through a roller, avoids added weight to the carriage. Screws already in the typewriter are ample for attaching. Models are regularly furnished for Royal, L. C. Smith, and Underwood machines.

The carbon roll, wound one- to six-ply, according to the number of copies desired, is placed on a spool mounted above the carriage of the typewriter so as to bring the ends of the carbon paper directly above the letterhead and copy sheets, as they are placed in the machine. When the twirler knobs are turned, the carbon is carried into the machine with the writing paper, carbon sheets being inserted so that their tops are at the point of the first writing line. After a letter is finished, the carbon is wound back on the roll automatically, before the letter is removed, ready for use on the next letter. A cutting edge permits the worn portion to be cut off when copies become faint.

EQUIPMENT-RESEARCH CORPORATION, CHICAGO

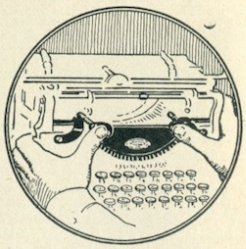
It can be folded out of the way when the typewriter is lowered into the desk, or may be quickly removed entirely.

Price $10.00
Carbon paper, per roll..... 1.00

INSTANTO TYPE CLEANER

Sold by the Instanto Sales Corporation, *27 East 22nd Street, New York City.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



The Instanto Type Cleaner is a device for cleaning the typefaces of Remington, Underwood, L. C. Smith and Royal typewriters, with speed and cleanliness to the operator.

It consists of a brush, set in a metal back, shaped to conform to the arc formed by the type when they are at rest. A stamped steel frame which clamps to the frame of the typewriter, forms a housing for the brush when it is not in use.

To operate, the thumbs are pressed against both sides of the frame, causing the brush to pass over the surface of all the type at one time, cleaning all type in one quick motion. Releasing the pressure allows the brush to spring back out of the way.

Models are made for the above mentioned machines only..... $5.00
(Models for other makes of typewriters are being developed)

KRANTZ

Combined Shock Absorber, Silencer and Desk Clamp

Made by Edward Krantz Products Company, *3847 Lincoln Avenue, Chicago, Illinois. Sold by mail direct to user, and through office equipment dealers and salesmen throughout the world.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]

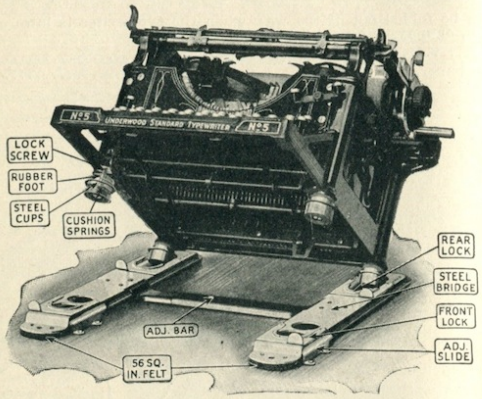
This device is intended to supplant, by a single mechanism, all the usual equipment heretofore employed to reduce the noise created by the operation of a typewriter on a desk; to enliven the touch of the keys, making operation more pleasing; to relieve the mechanism of the machine from the jars and shocks of operation, thus increasing the life of the machine and reducing the need for repairs and adjustments; to relieve the end of the day fatigue of the typist by lessening the rigidity of the action of the machine; and to fasten the typewriter securely to the platform of drop head desks.

Likewise it may be used under bookkeeping and billing machines, adding and calculating machines, etc.

The principle employed in the design of the device, creates an insulating mechanical cushion between the desk and the machine, to prevent the sounds created by typing being transmitted to and magnified by the desk surface.

Two flat pieces of steel, surfaced on the under side with felt, comprise the base members, to each of which is riveted a top member forming a bridge, into which are sunk, through apertures, steel cups to hold the feet of the typewriter. The cups are fitted with spiral cushion springs of the correct tension, accurately determined in relation to the weight of the typewriter. The feet of the typewriter rest on the springs.

EQUIPMENT-RESEARCH CORPORATION, CHICAGO



When the feet of the machine are inserted into the cups, and the cups in turn are dropped into openings of the bridge or side frames of the device, the typewriter, instead of resting solidly, is held in suspension, (by the cup springs, and also by the spring tension of the bridge itself) yet the necessary rigidity for efficient operation is maintained. The principle of suspension has the effect of imparting a live, flexible action to the keys; the noise of impact of the type bars and carriage movement is lessened; the jar on the working parts is reduced.

Adjustments are provided to accommodate the feet spacing of any typewriter. Because the thread for the fastening bolt of the feet differs in each machine, special feet with the correct bolts are furnished with each outfit. A slide locks-in the feet, serving the same purpose as a clamp to hold the machine securely when the desk head is dropped. The typewriter may be detached instantly if desired. The entire mechanism is fastened to the desk with four screws on the adjusting slide. These allow the typewriter to be pulled forward to suit operator.

Models and Prices

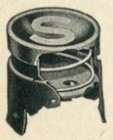
Made in one Universal Model, adjustable for all makes of standard typewriters. Special rubber feet and fastening bolts are supplied for machine it is desired to equip.

Price, F. O. B. Chicago.....$7.50

MASTER SPEED KEYS

Made by the Speed Key Manufacturing Company, Incorporated, *20 Columbus Place, Brooklyn, New York. Sold by typewriter dealers.*

[FOR LOCALIZED LIST OF SALES REPRESENTATIVES, SEE GREEN PAGES.]



Serving the same purpose as rubber cushion keys for typewriters, these keys are of metal and celluloid construction, employing a more positive and permanent cushioning medium. Each key consists of an assembly comprising the key top or striking surface of green or black celluloid, a base section, and a coil spring. The top surface rides on a tension set up by the spring, and when touched with the finger, is slightly resilient, similar to but more pronounced than rubber. The base section slips on over the top of the standard keys on a typewriter, in a manner similar to that by which rubber keys

are attached. The extra resiliency produced in these auxiliary keys is intended to eliminate the shock and jar of the type bar impact.

Finished in dull green or black enamel, with characters in white.

Price per set $4.00

NOISELESS AUTOMATICS

Made by the Speed Key Manufacturing Company, Incorporated, *20 Columbus Place, Brooklyn, New York. Sold by typewriter dealers.*

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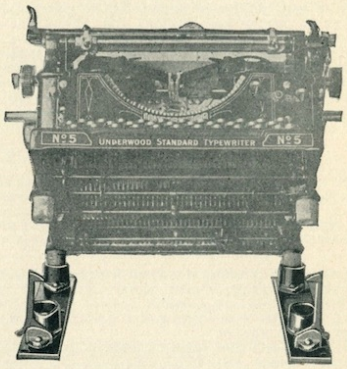

Combines a desk clamp and sound and shock absorbing device for typewriters. Two frame pieces each hold two cups, into which the rubber feet of the typewriter are inserted, permitting the weight of the typewriter to rest upon felt covered coil springs, forming an arrangement which is a non-conductor of sound, and which applies a cushioning effect to the operation of the typewriter.

Frames, one on each side of the typewriter, are attached to the desk by screws; a hook-latch held in position by a spring, serving to keep the typewriter in place when closed in a drop-head desk. The arrangement permits the removal of the typewriter at any time for cleaning, etc.

Special models are made for each typewriter, the difference being in the spacing of the cups to accommodate the feet, and the position and length of the hook for holding the typewriter with respect to the design and dimension of the side frames.

Price $3.50